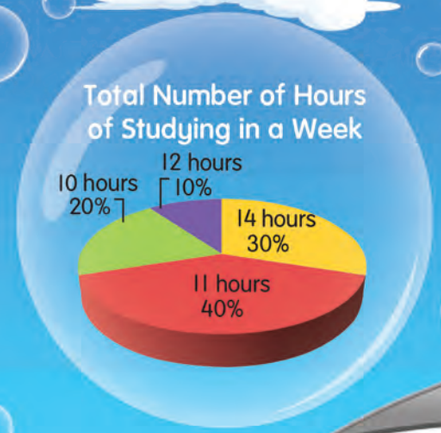

KEMENTERIAN PENDIDIKAN MALAYSIA

MATHEMATICS YEAR 5

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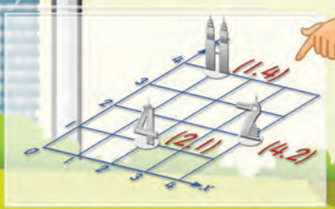

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KSSR
(SEMAKAN 2017)
KEMENTERIAN PENDIDIKAN MALAYSIA

STANDARD-BASED CURRICULUM FOR PRIMARY SCHOOL (REVISED 2017)
DUAL LANGUAGE PROGRAMME

MATHEMATICS YEAR 5

Writers
Chan Yook Lean
Gobi a/l Krishnan
Rozaili bin Mohd Ali

Translators
Ahmad Azrul Arefe bin Ahmad Rosdi
Jeyasingam a/l Govindaraj
Ng Lee Ching
Norehan binti Mohamed Shaharoun

Editors
Ainol Rafezah binti Alias
Asmahanim binti Ab Rahman
Mohd 'Udzair bin Depanaik
Nurul Shaheza binti Zamri

Graphic Designers
Mohd Nazri bin Murtaaza
Ahmad Kamal Firdaus bin Amer Hussin

Illustrator
Sheikh Zulkhibri bin Salim

DBP
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CONTENTS

PREFACE

The writing and publication of the *Mathematics Year 5 Textbook for Primary School* is based on the National Education Philosophy, the National Education Policy, and the Malaysia Education Blueprint (PPPM) 2013 – 2025. The emphasis on activity-based and inquiry-discovery learning supported by continuous assessment methods, as well as the integration of the six KSSR fundamental strands is hoped to produce human capital that is intellectually, spiritually, emotionally, and physically balanced and harmonious. In addition, its content emphasises on the socio-cultural aspects of the Malaysian society, as well as the integration of the Cross-Curricular Elements (CCE), Information and Communication Technology, Entrepreneurship, and the 21st Century Learning as we are heading towards world-class education.

The content of this textbook is systematically designed into eight units to meet the requirements of the *Dokumen Standard Kurikulum dan Pentaksiran* (DSKP) published by the Curriculum Development Division, Ministry of Education Malaysia. This textbook emphasises the concepts and skills in the Learning Standards that prioritise pupils' engagement in learning. The reasoning questions in the learning activities are expected to generate pupils ideas and foster a two-way communication between pupils and teachers, and among peers. The Higher Order Thinking Skills (HOTS) questions aim to produce smart pupils who are globally competitive and competent. The function of this book is optimised by providing tips, relevant facts, Quick Response (QR) Code, Augmented Reality (AR), and a variety of activities including hands-on, projects, and games. The content of this textbook is also supplemented with formative and summative exercises. This is to help teachers identify pupils' level of understanding to implement further learning for improving pupils' mastery of the concepts of the topics learned. Two sets of review questions are provided to strengthen pupils' acquisition of knowledge and skills.

Teacher's Notes enable teachers to implement learning activities effectively. Suggestions of websites are provided for pupils to explore the knowledge learned and to carry out additional exercises. The content of this textbook is presented in a user-friendly manner with the elements of entertainment to attract pupils' interest and incorporated with the elements of national integration, patriotism, and culture through the use of names, characters, and graphic materials.

FUNCTIONS OF THE ICONS

Topic based on learning area.

Subtopic is the learning standard that needs to be mastered.

The mascot presents questions and statements to encourage pupils to use reasoning skills.

Questions to challenge the intellectual ability, HOTS, and encourage critical and creative thinking skills.

Provide relevant facts for pupils' knowledge and meanings of mathematical terms.

Access learning materials in the form of audios, videos, texts, websites, and worksheets.

Useful information on skills being learned.

Activities to reinforce skills learned in the form of hands-on activities, projects, songs, and games.

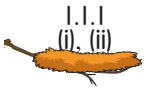
Formative exercises to assess pupils' mastery of newly learned skills.

Summative exercises to evaluate and reinforce pupils' understanding of all skills learned.

Mathematical recreational activities in the form of games, crossword puzzles, projects, and edutainment involving a number of skills.

Two sets of revision exercises to enhance pupils' understanding.

Emphasis on the learning activities and suggestions on alternative activities and websites for learning activities and additional exercises.



Content Standard and Learning Standard Number as skill indicators to be mastered based on DSKP.

List of mathematical terms and their meanings that encompass all topics.

List of answers for Brain Teaser, Try It Again, and Self-Test.

AR Mathematics Year 5.

1 WHOLE NUMBERS AND OPERATIONS

RECOGNISE AND WRITE NUMBERS

1

Number of domestic passengers handled (arrival and departure)
FIRST QUARTER OF 2018

Langkawi International Airport
602 337

Bintulu Airport
200 339

Miri Airport
522 034

Tawau Airport
368 224

Source: http://rb.gy/ve1ief

a What is the number of passengers at Langkawi International Airport?

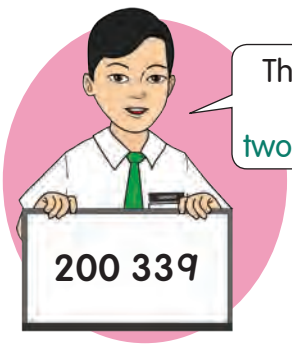
hundred thousands	ten thousands	thousands	hundreds	tens	ones
6	0	2	3	3	7

six hundred two thousand three hundred and thirty-seven

TIPS

Say the number in the thousands group, followed by the next three numbers.

b



The number of passengers at Bintulu Airport is two hundred three three nine.

Is the number said correctly? Discuss.

TEACHER'S NOTES

1.1.1 (i), (ii)

- Emphasise the correct way to say numbers.
- Ask pupils to say other numbers found in the information and source above.

2

A group of architects used five hundred forty-two thousand Lego blocks to build a mini model of the Petronas Twin Towers at Legoland.

MIND TRIGGER

Source: https://rb.gy/la6fdk

SCAN THIS

3

a

6·1·2021

Write "two hundred thirty thousand and fifteen" in numerals.

230 015

b

6·1·2021

Write 405 103 in words.

four hundred five thousand one hundred and three

4

125 070

one hundred twenty-five thousand and seven

one hundred twenty-five thousand zero and seventy

one hundred twenty-five thousand and seventy

Which words match the given numerals? Discuss.

TEACHER'S NOTES

1.1.1 (iii)

- Pupils can write "hundred" or "one hundred" for numbers that involve 100.

BRAIN TEASER

2 0 3 4 1 5

Form three 6-digit even numbers that are larger than five hundred thousand.

TRY THESE

1 Say the numbers.

(a) 847 291 (b) 513 410 (c) 630 205 (d) 409 032

2 Write the numbers in words.

(a) 528 314 (b) 770 835 (c) 900 017 (d) 603 804

3 Find the correct numbers in the number grid for the following words. Rewrite the numbers.

(a) two hundred fifteen thousand three hundred and seventy-five
(b) seven hundred thousand five hundred and forty-eight
(c) eight hundred twenty thousand and twenty-nine
(d) five hundred eighty thousand and seven
(e) nine hundred thousand and thirty-six
(f) four hundred thousand and nineteen
(g) three hundred seventy-six thousand and fifty-six

9	0	0	0	3	6	1	4	6	5
8	5	8	0	0	0	7	0	1	5
2	5	1	3	7	5	8	0	6	2
5	8	0	0	7	0	9	0	5	7
1	3	8	2	0	2	9	1	2	1
3	2	7	4	0	6	8	9	0	7
7	7	2	1	5	3	7	5	4	6
5	4	1	3	4	0	2	3	1	5
3	9	0	4	8	2	0	0	2	9
3	7	6	0	5	6	1	2	6	4

TEACHER'S NOTES

1.1.1 (i), (ii), (iii)

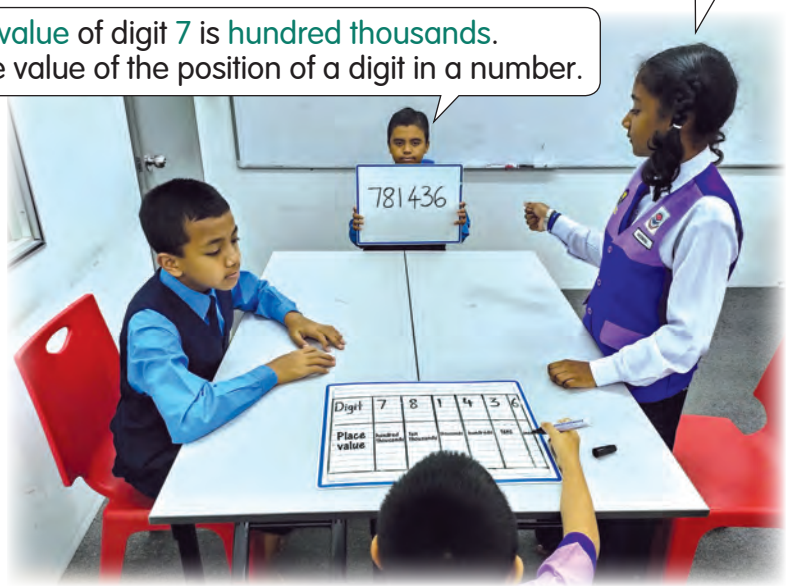
- Vary activities for questions on "Try These". For example, quick answer quiz for question 3 and add new suitable questions to enhance pupils' understanding.

EXPLORE NUMBERS

1 **a**

Mukhriz, what is the place value of digit 7?

The place value of digit 7 is hundred thousands.
Place value is the value of the position of a digit in a number.



b Partition 781 436 based on place values.

Digit	7	8	1	4	3	6
Place value	hundred thousands	ten thousands	thousands	hundreds	tens	ones

781 436 = 7 hundred thousands + 8 ten thousands + 1 thousands + 4 hundreds + 3 tens + 6 ones

3 **a**

Let's complete the place value and digit value chart for 531 089. Then, partition 531 089 based on place values and digit values.

Digit	5	3	1	0	8	9
Place value	hundred thousands		thousands		tens	ones

531 089 = 5 hundred thousands + 3 + 1 thousands + 0 + 8 tens + 9 ones

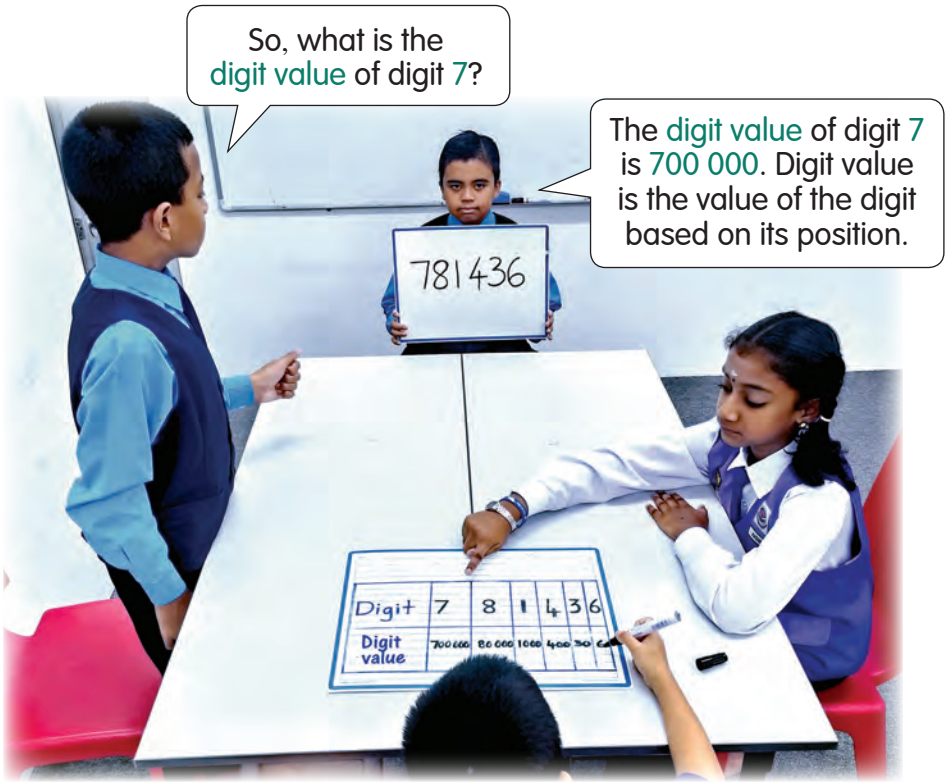
KPM

TEACHER'S NOTES

1.1.2 (i), (ii)

- Emphasise that values involving 0 in place values must be written when partitioning numbers based on place values.

2 **a**

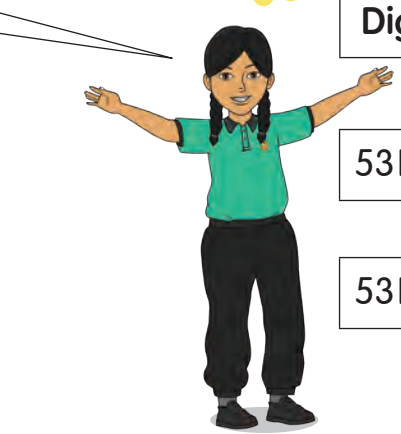


b Partition 781 436 based on digit values.

Digit	7	8	1	4	3	6
Digit value	700 000	80 000	1 000	400	30	6

781 436 = 700 000 + 80 000 + 1 000 + 400 + 30 + 6

b



Digit	5	3	1	0	8	9
Digit value	500 000	30 000		0		9

531 089 = 500 000 + 30 000 + ☐ + 0 + ☐ + 9

OR

531 089 = 500 000 + 30 000 + ☐ + ☐ + 9

1.1.2 (i), (ii)

- Emphasise that values involving 0 in digit values can be left out when partitioning numbers based on digit values.

4 What are the numbers partitioned in **a** and **b**?

a ____ = 400 + 600 000 + 7 + 30 + 10 000

Digit value	600 000	10 000	0	400	30	7
Digit	6	1	0	4	3	7

610 437

b ____ = 5 thousands + 1 ones + 8 hundred thousands
+ 0 ten thousands + 3 tens + 4 hundreds

Place value	hundred thousands	ten thousands	thousands	hundreds	tens	ones
Digit	8	0	5	4	3	1

805 431

5 **a** 402 157 = 400 000 + *x* + 50 + 7 + 100

b 914 072 = 1 ten thousands + *y* + 0 hundreds
+ 9 hundred thousands + 7 tens + 2 ones

What are the values of *x* and *y*?

TRY THESE

1 Write the place values and digit values for the underlined digits.

a 308 715 **b** 196 042 **c** 550 760 **d** 893 013

2 Complete the sentences based on the number card below.

270 198

a The place value for 2 is ____.
b The digit value for 7 is ____.
c Digit at the hundreds place is ____.
d ____ is the digit value for 9.
e ____ is the place value for 8.
f Digit at the thousands place is ____.

3 Partition 709 165 based on its place values.

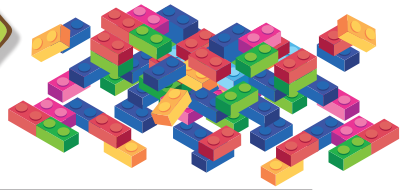
4 Complete these.

a 340 935 = ____ + 30 + ____ + 40 000 + 5

b 417 085 = 4 hundred thousands + 0 hundreds + ____ + 1 ten thousands
+ ____ + 5 ones

c ____ = 500 + 900 000 + ____ + 2

COMPARE AND ARRANGE NUMBERS



1 The table shows the number of blocks used to build four models.

Model	Robot	Building	House	Car
Number of blocks	118 200	320 915	120 290	98 050

a Which model used more blocks, robot or house?

	hundred thousands	ten thousands	thousands	hundreds	tens	ones
Robot model	1	1	8	2	0	0
House model	1	2	0	2	9	0

same digits

Compare the ten thousands digits. 20 000 is more than 10 000.

120 290 is more than 118 200.

The house model used more blocks.

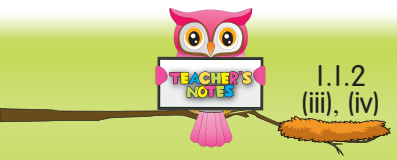
b Arrange all four numbers of blocks in ascending order.

Compare the number of digits. Then, compare the hundred thousands digits.

hundred thousands	ten thousands	thousands	hundreds	tens	ones	
1	1	8	2	0	0	
3	2	0	9	1	5	← the largest number
1	2	0	2	9	0	
	9	8	0	5	0	← the smallest number

The value of digit **3** is **300 000**. The value of digit **1** is **100 000**.
300 000 is **larger than 100 000**.
320 915 is **the largest number**.

Ascending order **98 050, 118 200, 120 290, 320 915**



1.1.2 (iii), (iv)

- Carry out group or intergroup activities. Each group writes four numbers and compares any two numbers. Then, arrange the numbers in ascending or descending order.

2 The following are four number cards.

a Which number has a smaller value, 536 500 or 538 900?

hundred thousands	ten thousands	thousands	hundreds	tens	ones
5	3	6	5	0	0
5	3	8	9	0	0

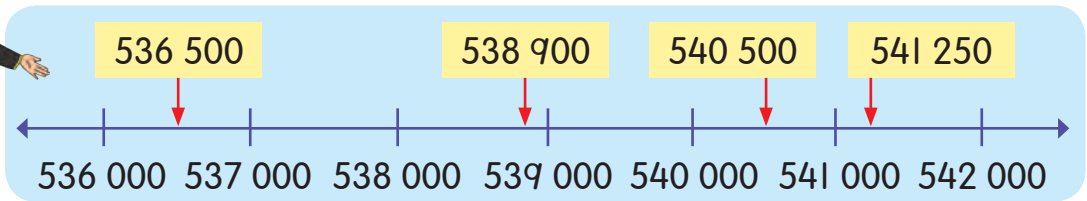
same digits

Compare the thousands digits.

Value of digit 6 is 6 000. Value of digit 8 is ____.
____ is less than ____.

536 500 is **smaller than** 538 900.

b Arrange all four numbers above in descending order.



Descending order **541 250, 540 500, 538 900, 536 500**

- Ascending order - numbers arranged from the smallest to the largest value.
- Descending order - numbers arranged from the largest to the smallest value.

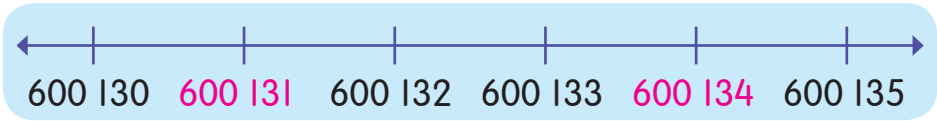
TEACHER'S NOTES

1.1.2 (iii), (iv)

- Stress that any number sequence in ascending or descending order may not necessarily form a pattern.

3 | 600 128 | 600 131 | T | 600 134 | 600 137

Look at the number sequence above.
What are the possible values of T?



The possible values of T are **600 132** or **600 133**.

X, Y and Z are 6-digit numbers and W is a 5-digit number. Y is larger than X. Z is smaller than X. Arrange the numbers W, X, Y and Z in descending order.

1 Which number is larger?

a) 396 542 or 395 642

b) 668 095 or 668 905

2 Fill in the blanks with "is more than" or "is less than".

a) 354 923 ____ 345 923

b) 690 178 ____ 690 187

c) 100 400 ____ 110 000

d) 405 109 ____ 405 099

3 Arrange the numbers in ascending and descending orders.

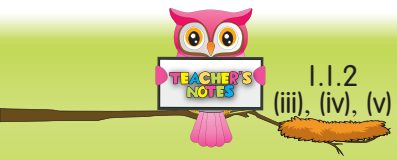
a) 505 316, 501 905, 503 802, 504 990

b) 240 121, 240 212, 240 112, 240 122

4 Complete the possible values for the number sequences below.

a) 709 415, ____ , 709 418, 709 430

b) 880 148, 879 021, ____ , 854 997



1.1.2 (iii), (iv), (v)

- Carry out a competition to arrange number cards and complete number sequences in descending or ascending order.

PRIME NUMBERS

1

2
$2 \div 1 = 2$
$2 \div 2 = 1$
2 can only be divided by 1 and itself.

3
$3 \div 1 = 3$
$3 \div 3 = 1$
3 can only be divided by 1 and itself.

4
$4 \div 1 = 4$
$4 \div 2 = 2$
$4 \div 4 = 1$
4 can be divided by 1, 2 and itself.

5
$5 \div 1 = 5$
$5 \div 5 = 1$
5 can only be divided by 1 and itself.

6
$6 \div 1 = 6$
$6 \div 2 = 3$
$6 \div 3 = 2$
$6 \div 6 = 1$
6 can be divided by 1, 2, 3 and itself.

a

2, **3** and **5** are **PRIME NUMBERS** because these numbers **can only be divided by 1** and **by itself.**

2, 3, 5 → PRIME NUMBERS

TIPS

PRIME NUMBERS
- **must be greater than 1.**
- can only be divided by 1 and itself.

b

4 and 6 can be divided by 1. → 4 and 6 can be divided by itself. → 4 and 6 can be divided by other numbers. → **4 and 6 ARE NOT PRIME NUMBERS**

Are 7, 8 and 9 prime numbers? Discuss.

2

Prime numbers from 10 to 20 are 11, 13, 17 and 19.

I know prime numbers from 20 to 40.

TEACHER'S NOTES

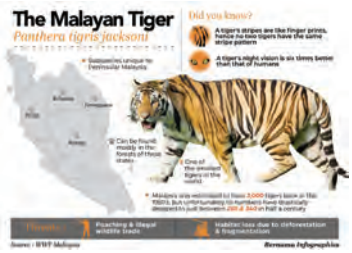
1.2.1

- Discuss how to determine 2-digit prime numbers.
- Surf https://www.youtube.com/watch?v=V08g_lkKj6Q

MALAYAN TIGER FUND

Tools/Materials glue, adhesive tape, pens, coloured pencils, coloured papers, pictures of Malayan tiger, cylindrical container, MS Word software

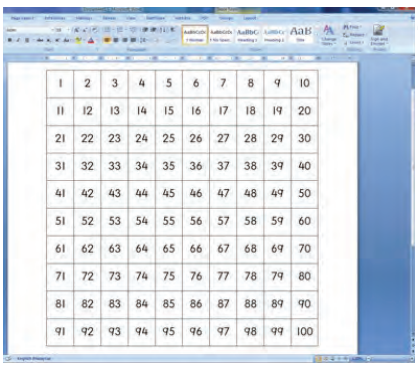
Participants 4 pupils in a group



Source: http://wwf.org.my/tiger_pledge_/

Task

1. Wrap the cylindrical container with a coloured paper.
2. Paste a picture of Malayan tiger on the container.
3. Launch MS Word software.
4. Click Insert and select Table 10 × 10.
5. Type number 1 to 100 in the table and print it out.
6. Colour all prime numbers.
7. Cut out all the prime numbers and paste them onto the container.



TRY THESE

1. Identify prime numbers and rewrite them.

57	25	13	27	51	33	92	74
69	89	97	48	61	55	47	31

2. 3 is a prime number but 30 is not a prime number. Why is 30 not a prime number?

3. List all prime numbers with digit 7 within 100. How many are there altogether?

NUMBER PATTERNS

1 a

+ 8 + 8 + 8

360 210 → 360 218 → 360 226 → 360 234

The value of the numbers becomes larger. This number pattern is in ascending order. Each value is increasing by eights.

This number pattern is in ascending order by eights.

b

+ 100 000 + 100 000 + 100 000 + 100 000

503 405 → 603 405 → 703 405 → 803 405 → 903 405

This number pattern is in ascending order. The digits in hundred thousands increase by 100 000. The number pattern above is in ascending order by hundred thousands.

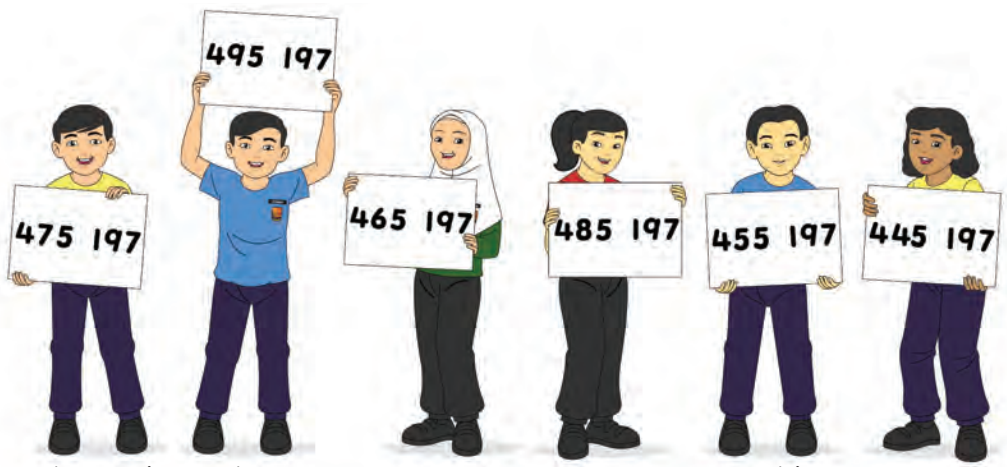
c

127 049 | 128 049 | 129 049 | ☐ | 131 049 | ☐

The number pattern above is in ☐.

Explain how you determine this pattern and complete it.

2 Arrange the following numbers in ascending order.



Shamsul Zuhairi Zura Tan Sahli Jayanti

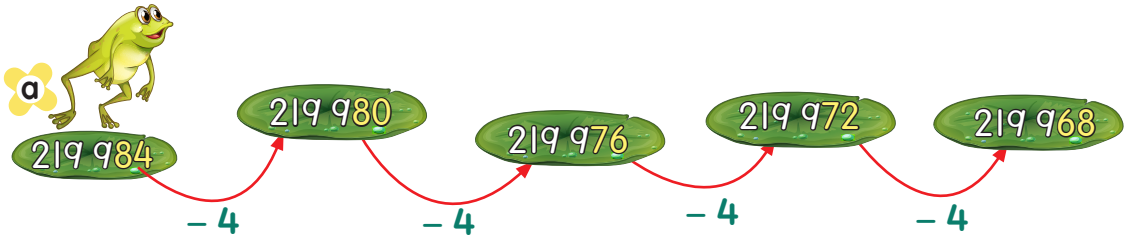
Who will be in the fourth position?

TEACHER'S NOTES

1.5.1
1.5.2

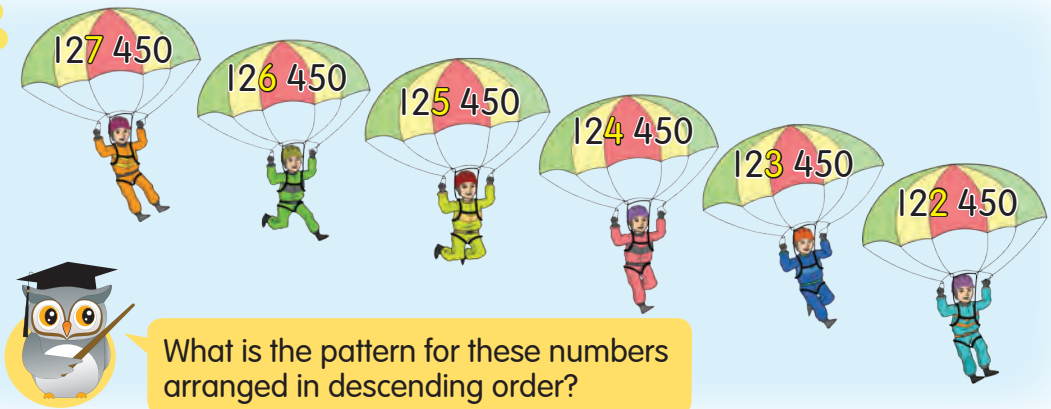
- Provide sets of number patterns in ascending order by twos, threes, fours, fives, sixes, sevens, nines, tens, hundreds, thousands, and ten thousands. In groups, ask pupils to identify the number patterns.

3 a

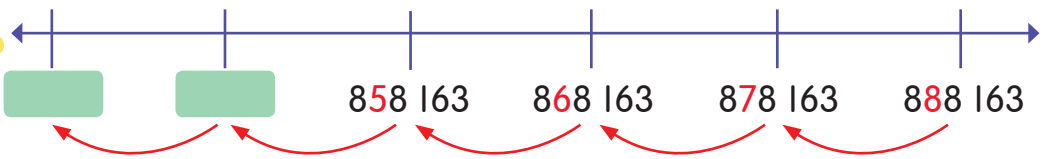


The value of the numbers becomes smaller. This number pattern is in descending order. The number pattern is in descending order by fours.

b



c



Count backwards in ten thousands. Complete this number line.

TRY THESE

1 Determine the number patterns below.

a

b 980 560, 980 555, 980 550, 980 545, 980 540

c 489 393, 490 393, 491 393, 492 393, 493 393

2 Complete and state the following number pattern.

959 289, 859 289, ____, 659 289, 559 289, ____

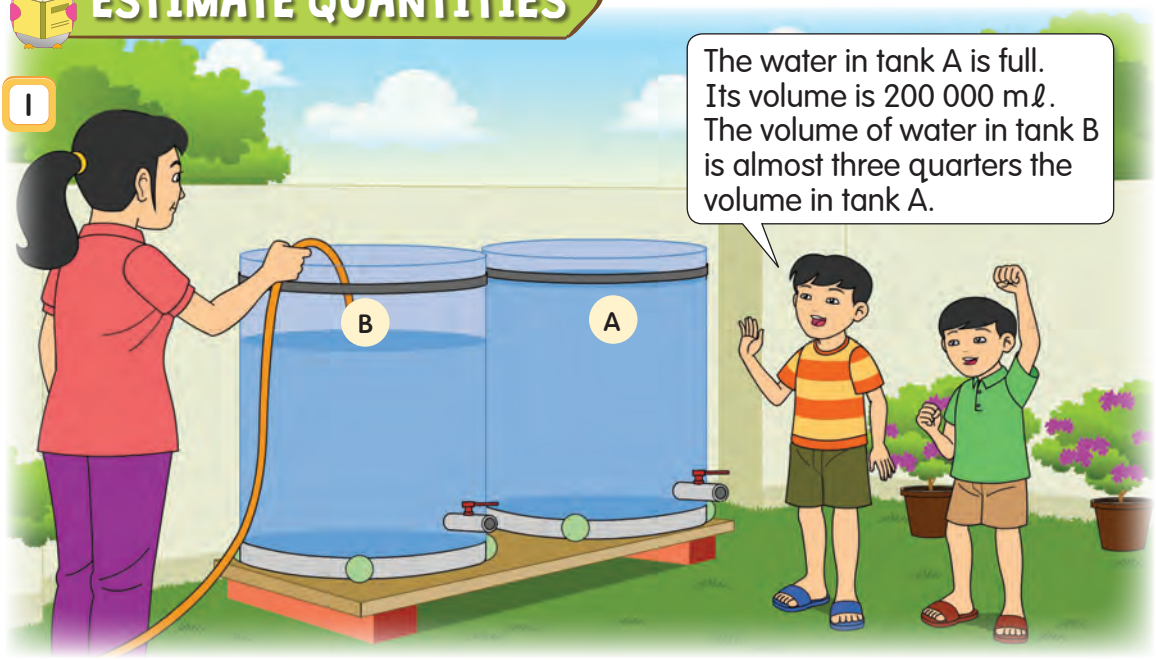
TEACHER'S NOTES

1.5.1
1.5.2

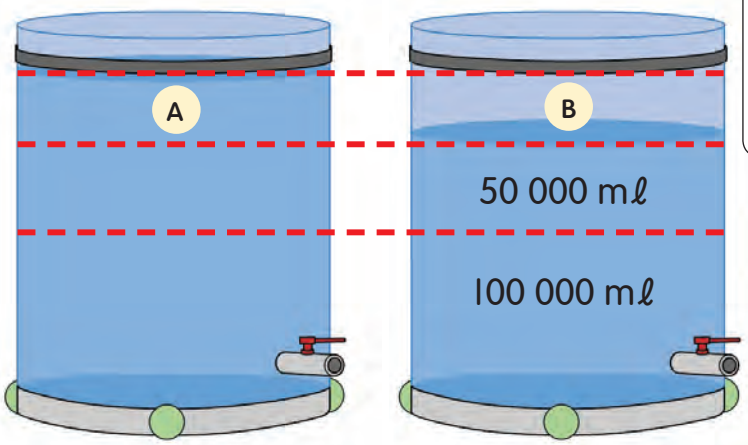
- Conduct a quiz in pairs to determine number patterns in descending order by twos, threes, fives, sixes, sevens, eights, nines, tens, hundreds, and hundred thousands.

ESTIMATE QUANTITIES

1



Estimate the volume of water in tank B.



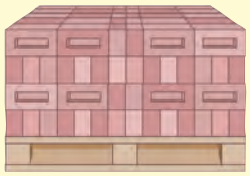
SCAN THIS

The volume of water in tank B is **estimated to be less than 200 000 mℓ** or **approximately 150 000 mℓ**.

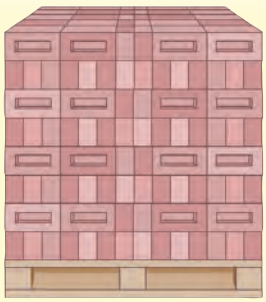
The maximum volume of another water tank is 3 times the maximum volume of tank A. Estimate the maximum volume of that tank.

- Carry out simulation activities to estimate quantities using daily life situations.

2 The mass of half of the bricks on pallet A is about 370 kg.



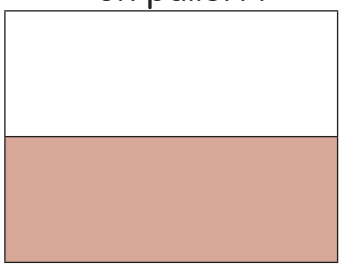
Pallet A mass is about 370 kg



Pallet B

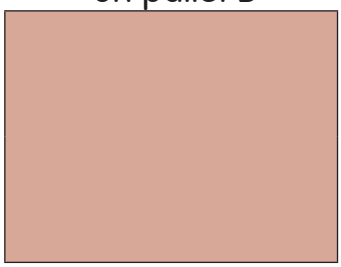
Estimate the mass of bricks on pallet B.

mass of bricks on pallet A



about 370 kg

mass of bricks on pallet B



□ × 370 kg = □

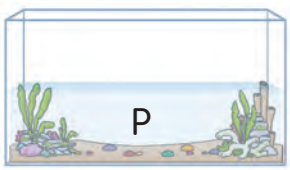
The number of bricks on pallet B is about 2 times the number of bricks on pallet A.

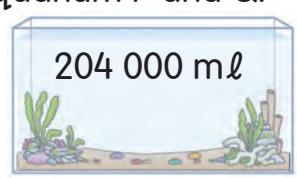
The mass on pallet B is estimated to be **about** □ **kg**.

TRY THESE

Estimate the:

(a) volume of water in aquarium P and Q.





(b) number of sweets in machine B.

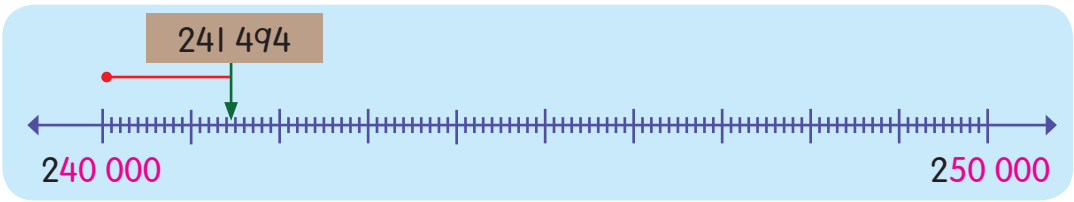
ROUNDING OFF NUMBERS

1 The rubber production of two states in 2018 are as follows:

State	Rubber produced (kg)
Selangor	241 494
Melaka	264 405

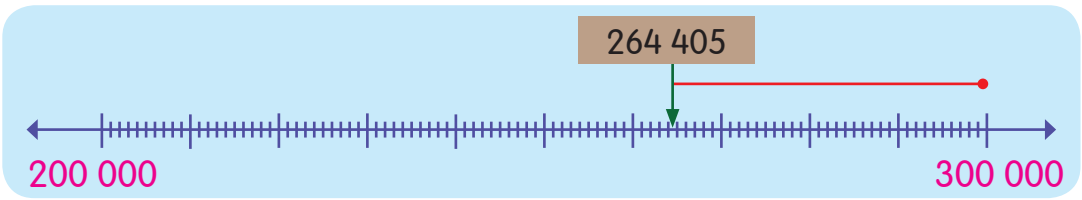
Source: https://rb.gy/a5jncx

a Round off 241 494 to the nearest ten thousand.



241 494 is between 240 000 and 250 000.
241 494 is nearer to 240 000.
241 494 becomes 240 000 when rounded off to the nearest ten thousand.

b Round off 264 405 to the nearest hundred thousand.



264 405 is between _____ and _____.
264 405 is nearer to _____.
264 405 becomes _____ when rounded off to the nearest hundred thousand.

BRAIN TEASER

Azlan rounded off 778 990 to become 780 000. When rounded off at the same place value, 109 380 becomes _____.

TEACHER'S NOTES

1.4.1

- Carry out activities to round off numbers using other values on the number line above.
- Discuss rounding off numbers to the nearest ten, hundred, and thousand.

2 Round off 218 300 cm to the nearest ten thousand cm.

+ 1

2 1 8 3 0 0 → 220 000

nearest ten thousand

- Digit 8 to the right is more than 5.
- **Add 1** to the **digit at ten thousands** place.
- All digits after ten thousands become 0.

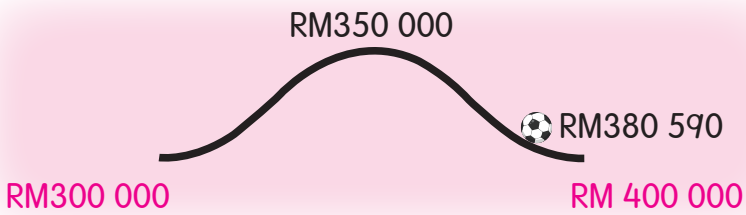
Source: https://rb.gy/al0pzt

- If the digit to the right is 0 to 4, the digit to be rounded remains unchanged. All digits to its right become 0.
- If the digit to the right is 5 to 9, add 1 to the digit to be rounded off. All digits to its right become 0.

218 300 cm becomes **220 000 cm** when rounded off to the nearest **ten thousand cm**.

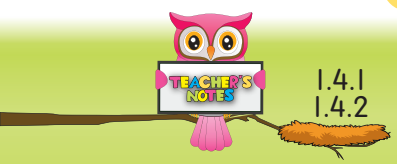
Use number line to check the answer above.

3 Round off RM380 590 to the nearest hundred thousand ringgit.



RM380 590 is nearer to RM400 000.
RM380 590 rounded off to the nearest hundred thousand ringgit becomes **RM400 000**.

Based on the diagram in example 3, state three other values that become RM400 000 when rounded off to the nearest hundred thousand ringgit.



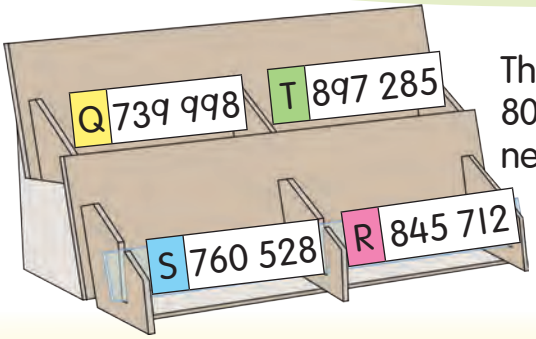
1.4.1
1.4.2

BRAIN TEASER

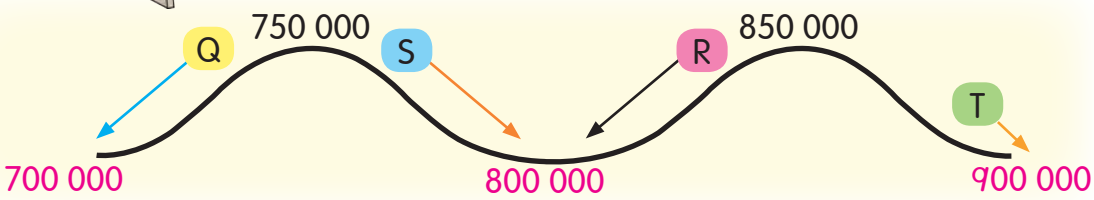
0 5 0 7 9 3

Form the largest 6-digit number from all the number cards above. Then, round off the answer to the nearest ten thousand and the nearest hundred thousand.

4



The number on which card becomes 800 000 when rounded off to the nearest hundred thousand?



S is nearer to 800 000.

R is nearer to 800 000.

760 528 —(nearest hundred thousand)→ 800 000

845 712 —(nearest hundred thousand)→ 800 000

The numbers on **cards S** and **R** become 800 000 when rounded off to the nearest hundred thousand.

TRY THESE

1. Round off the following numbers to the nearest thousand, ten thousand, and hundred thousand.
   (a) 129 475 (b) 605 148 (c) 983 975
2. Round off:
   (a) RM259 648 to the nearest hundred thousand ringgit.
   (b) 488 750 g to the nearest thousand gram.
3. State three numbers which become 600 000 when rounded off to the nearest hundred thousand.

TEACHER'S NOTES

1.4.1
1.4.2

- Use circle maps to show numbers which can be rounded off to the nearest ten thousand or hundred thousand.

ADDITION

1 The table below shows the number of primary and secondary school teachers in 2019.

School	Number of teachers
Primary	182 587
Secondary	237 317

Source: https://rb.gy/paahbz

What is the total number of primary and secondary school teachers in 2019?

182 587 + 237 317 = ☐

	hundred thousands	ten thousands	thousands	hundreds	tens	ones
	1 1	8	2	1 5	1 8	7
+	2	3	7	3	1	7
	4	1	9	9	0	4

SCAN THIS

8 tens + 1 tens + 1 tens = 10 tens
10 tens = 1 hundreds + 0 tens

7 ones + 7 ones = 14 ones
14 ones = 1 tens + 4 ones

8 ten thousands + 3 ten thousands = 11 ten thousands
11 ten thousands = 10 ten thousands + 1 ten thousands
= 1 hundred thousands + 1 ten thousands

182 587 + 237 317 = **419 904**

The total number of primary and secondary school teachers in 2019 is **419 904**.

BRAIN TEASER

State 4-digit and 5-digit numbers that give an answer of 6-digit when added up.

☐☐☐☐ + ☐☐☐☐☐ = ☐☐☐☐☐☐

TEACHER'S NOTES

1.6.1 • Surf https://rb.gy/o0ktlw

2

invitation card
980 pieces

name card
2 350 pieces

poster
145 920 pieces

Based on the information above, total up the number of the three printed materials.

980 + 2 350 + 145 920 = ☐

Start by adding digits that make 10 or digits that are the same.

Method 1

$$\begin{array}{r} {\scriptstyle 1\ \ 1} \\ 980 \\ +\ 2\,350 \\ \hline 3\,330 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 1} \\ 3\,330 \\ +\ 145\,920 \\ \hline 149\,250 \\ \hline \end{array}$$

Method 2

$$\begin{array}{r} {\scriptstyle 2\ \ 1} \\ 980 \\ 2\,350 \\ +\ 145\,920 \\ \hline 149\,250 \\ \hline \end{array}$$

980 + 2 350 + 145 920 = **149 250**

The total number of the three printed materials is **149 250** pieces.

---

3 745 + 1 903 + 35 298 + 895 575 = ☐

Round off numbers to the nearest hundred.

745 → 700
1 903 → 1 900
35 298 → 35 300
895 575 → 895 600

Estimate the answer first.

$$\begin{array}{r} {\scriptstyle 1\ 1\ 2} \\ 700 \\ 1\,900 \\ 35\,300 \\ +\ 895\,600 \\ \hline 933\,500 \\ \hline \end{array}$$

Then, calculate the actual answer.

$$\begin{array}{r} {\scriptstyle 1\ 1\ 2\ \ 2\ 2} \\ 745 \\ 1\,903 \\ 35\,298 \\ +\ 895\,575 \\ \hline 933\,521 \\ \hline \end{array}$$

933 521 is nearer to 933 500. The answer is reasonable.

745 + 1 903 + 35 298 + 895 575 = **933 521**

TEACHER'S NOTES 1.6.1

- Provide more exercises to reinforce the quick calculation skills by adding up the numbers that make 10 or digits that are the same first.

4 408 123 + 39 712 + 4 901 + 772 + 98 = ☐

```
  1
 408 123
+ 39 712
 447 835
```

```
  1 1
 447 835
+  4 901
 452 736
```

```
  1 1
 452 736
+   772
 453 508
```

```
  1 1
 453 508
+    98
 453 606
```

408 123 + 39 712 + 4 901 + 772 + 98 = **453 606**

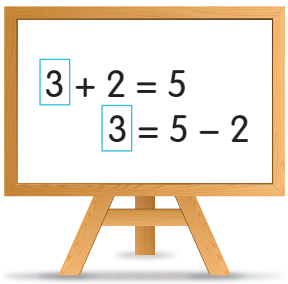
5 48 609 + 590 823 + 1 035 + 827 + 74 = ☐

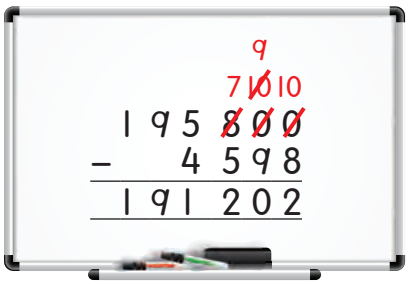
```
  1 1 1
   48 609
+ 590 823
 639 432
```

```
    1 1
  1 035
    827
+    74
  1 936
```

```
  639 432
+   1 936
  ☐
```

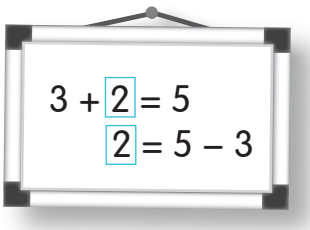
6 ☐ + 4 598 = 195 800

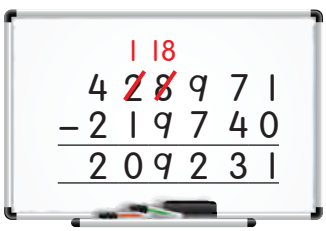




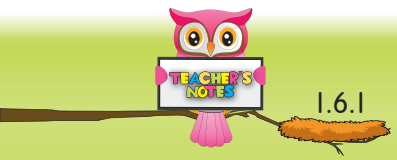
191 202 + 4 598 = 195 800

7 219 740 + ☐ = 428 971





219 740 + **209 231** = 428 971



1.6.1

- Guide pupils to add all five numbers in vertical form.
- Carry out simulation activities to find unknown using other simple examples.

BRAIN TEASER

△ + ⬡ + ⬟ = 309 520 ○ + ▭ = 189 792

△ + ○ + ⬟ + ▭ + ⬡ = ⬢

What is the value of ⬢ ?

TRY THESE

1 Add up.

a) 472 062 + 2 735 = ____ b) 82 730 + 173 425 = ____

c) 680 351 + 27 912 + 805 = ____ d) 7 063 + 92 + 175 + 342 174 = ____

e) 74 + 290 + 8 109 + 50 273 + 490 358 = ____

2 The table shows the number of shirts produced according to sizes by a factory in a month.

Shirt size	XL	L	M
Number of shirts	2 034	51 673	192 509

Calculate the total number of the three shirt sizes produced.

3

The information shows the number of tourists to Langkawi Island for five months in 2020.

Source: https://www.lada.gov.my/statistik/

January	377 528
February	255 432
March	152 254
April	6 419
May	19 234

a) Calculate the total number of tourists that are fewer than 200 000 between the five months.

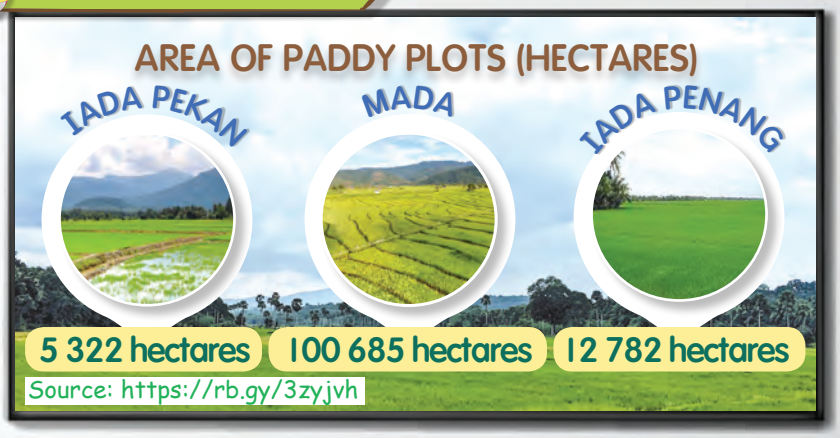
b) Total up the number of tourists in January, February, and March using estimation.

4 Solve these.

a) ____ + 908 = 241 000 b) 2 073 + ____ = 526 123

SUBTRACTION

1



MADA is Muda Agricultural Development Authority.

IADA is Integrated Agricultural Development Authority.

MIND TRIGGER

What is the difference in area between MADA paddy plots and IADA Pekan?

100 685 – 5 322 = ____

SCAN THIS

	hundred thousands	ten thousands	thousands	hundreds	tens	ones
	~~1~~ 0	~~10~~ 9	~~0~~ 10	6	8	5
–			5	3	2	2
		9	5	3	6	3

Subtract according to place values. Start with ones.

1 hundred thousands = 10 ten thousands

10 ten thousands – 1 ten thousands = 9 ten thousands

1 ten thousands = 10 thousands

100 685 – 5 322 = **95 363**

The difference in area between MADA paddy plots and IADA Pekan is **95 363** hectares.

How much larger is the area of paddy plots of MADA compared to IADA Penang?

TEACHER'S NOTES

1.6.2

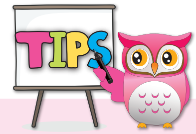
- Use the given data source to find the difference in area between paddy plots of other places.

2 600 000 – 24 750 – 6 098 = ☐

Method 1

```
    9 9   9
  5 10 10 10 10 10
  6 0 0  0 0 0
–   2 4  7 5 0
  5 7 5  2 5 0
```

```
             14
  6 15     1 4 10
5 7 5  2 5 0
–     6 0 9 8
5 6 9  1 5 2
```



Subtract two numbers first before subtracting the next number.

Method 2

600 000 – 24 750 = ☐
(–1) (–1)
599 999 – 24 749 = ☐

```
  5 9 9  9 9 9
–   2 4  7 4 9
  5 7 5  2 5 0
```

```
             14
  6 15     1 4 10
5 7 5  2 5 0
–     6 0 9 8
5 6 9  1 5 2
```

When 1 is subtracted from both numbers, the difference is the same.

600 000 – 24 750 – 6 098 = **569 152**

3 Subtract 43 195 and 178 from 305 608.

305 608 – 43 195 – 178 = ☐

```
         5 10
3 0 5  6 0 8
–        1 7 8
3 0 5  4 3 0
```

```
              12
  2 10     3 2 10
3 0 5  4 3 0
–   4 3  1 9 5
2 6 2  2 3 5
```

Now use method 1 as in example 2.
Are the answers the same?

305 608 – 43 195 – 178 = **262 235**

TEACHER'S NOTES 1.6.2

• Emphasise that the digits must be aligned to their place values while carrying out the subtraction in vertical form.

4 750 530 – 128 910 – 58 072 – 9 980 = ☐

Step 1 Estimate the answer.

750 530 ⟶ 750 000 58 072 ⟶ 60 000

128 910 ⟶ 130 000 9 980 ⟶ 10 000

$$\begin{array}{r} 750\,000 \\ -\ 130\,000 \\ \hline 620\,000 \end{array} \quad\rightarrow\quad \begin{array}{r} \overset{5}{\not6}\,\overset{12}{\not2}0\,000 \\ -\ 60\,000 \\ \hline 560\,000 \end{array} \quad\rightarrow\quad \begin{array}{r} 560\,000 \\ -\ 10\,000 \\ \hline 550\,000 \end{array}$$

Step 2 Calculate the actual answer.

$$\begin{array}{r} 7\overset{4}{\not5}\overset{9}{\overset{10}{\not0}}\overset{15}{\not5}30 \\ -\ 128\,910 \\ \hline 621\,620 \end{array} \quad\rightarrow\quad \begin{array}{r} \overset{5}{\not6}\overset{11}{\not2}\overset{11}{\not1}\,\overset{5}{\not6}\overset{11}{\overset{10}{\not2}}\not0 \\ -\ 58\,072 \\ \hline 563\,548 \end{array} \quad\rightarrow\quad \begin{array}{r} 5\overset{5}{\not6}\overset{12}{\not3}\,\overset{14}{\not5}\overset{14}{\not4}8 \\ -\ 9\,980 \\ \hline 553\,568 \end{array}$$

553 568 is nearer to 550 000. The answer is reasonable.

750 530 – 128 910 – 58 072 – 9 980 = **553 568**

---

5 How many need to be subtracted from 509 108 to make 417 293?

509 108 – ☐ = 417 293

Simple example.

4 – **3** = 1

4 – 1 = **3**

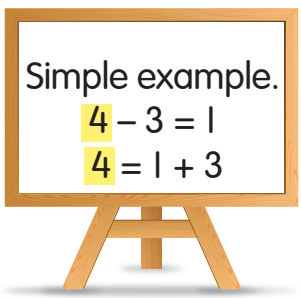
$$\begin{array}{r} \overset{4}{\not5}\overset{10}{\overset{8}{\not0}}\not9\,\overset{0}{\not1}\overset{10}{\not0}8 \\ -\ 417\,293 \\ \hline 91\,815 \end{array}$$

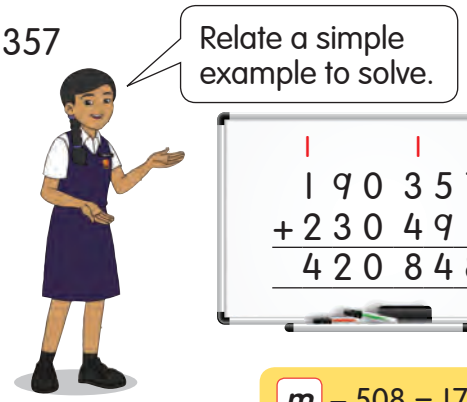
509 108 – **91 815** = 417 293

91 815 need to be subtracted from 509 108 to make 417 293.

TEACHER'S NOTES 1.6.2

6 ☐ – 230 491 = 190 357





420 848 – 230 491 = 190 357

m – 508 = 179 496
Find the value of *m*.

Given that 601 350 – 12 971 – 4 908 = 583 471 and 601 350 – 12 971 – 4 908 – *k* = 454 041. Calculate the value of *k*.

1 Subtract.

(a) 893 075 – 2 013 = ☐

(b) 794 105 – 75 342 = ☐

(c) 172 590 – 58 130 – 925 = ☐

(d) 300 000 – 392 – 4 157 = ☐

(e) 809 153 – 803 – 5 241 – 47 201 = ☐

(f) 1 000 000 – 89 732 – 69 – 593 702 = ☐

2 How many need to be subtracted from 672 160 to make 98 752?

3 The data shows the number of exported and imported fruits in Malaysia in 2017.

Exported	Imported
292 459	866 120

Source: https://rb.gy/nmgoac

How many more is the number of imported fruits compared to exported fruits?

4 Complete the number sentences.

(a) 921 503 – ☐ = 780 415

(b) ☐ – 410 178 = 88 901

• Encourage pupils to check their answers using calculator for "Try These" questions.

MULTIPLICATION

1

How many vases will fit into 35 215 boxes of similar size?

35 215 × 10 = ____

35 215 × 1 = 35 215

35 215 × 10 = 352 150

35 215 × 10 = **352 150**

352 150 vases will fit into 35 215 boxes of similar size.

Quick calculation.
a. 28 120 × 10 = ____
b. 15 900 × ____ = 159 000

2 8 493 × 100 = ____

$$\begin{array}{r} 8\,493 \\ \times\quad 100 \\ \hline 849\,300 \end{array}$$

8 493 × 100 = **849 300**

3 764 × 1 000 = ____

764 × 10 = 7 640
764 × 100 = 76 400
764 × 1 000 = ____

Study the pattern to answer.

4 652 × ____ = 652 000

652 × 10 = 6 520
652 × 100 = 65 200
652 × 1 000 = 652 000

652 × **1 000** = 652 000

BRAIN TEASER

33 × 27 = 891
333 × 27 = 8 991
3 333 × 27 = 89 991
33 333 × 27 = ***k***

Study the pattern in the answers above. What is the answer for ***k***?

5 What is the area of tiles produced in a day?

What is the total area of tiles produced in 4 days?

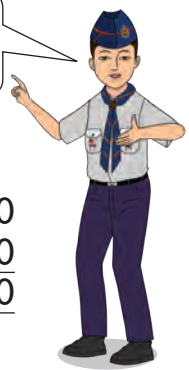
$4 \times 25\,000 =$ ____

Method 1

$$\begin{array}{r} {\scriptstyle 2} \\ 25\,000 \\ \times \quad 4 \\ \hline 100\,000 \end{array}$$

Method 2

Multiplication is repeated addition.



$25\,000 + 25\,000 + 25\,000 + 25\,000 =$ ____

$$\begin{array}{r} {\scriptstyle 1} \\ 25\,000 \\ +25\,000 \\ \hline 50\,000 \end{array} \rightarrow \begin{array}{r} 50\,000 \\ +25\,000 \\ \hline 75\,000 \end{array} \rightarrow \begin{array}{r} {\scriptstyle 1} \\ 75\,000 \\ +\ 25\,000 \\ \hline 100\,000 \end{array}$$

$4 \times 25\,000 =$ **100 000**

The total area of tiles produced in 4 days is **100 000** square metres.

Calculate 6 multiplied by 70 900.

TEACHER'S NOTES

1.6.3 • Emphasise the process of regrouping to help pupils avoid errors.

6 3 × 310 247 = ____

```
      1 2
  3 1 0 2 4 7
×           3
  9 3 0 7 4 1
```

3 × 310 247 = **930 741**

7 14 095 × 70 = ____

```
    2   6 3
  1 4 0 9 5
×         7 0
  9 8 6 6 5 0
```

Multiply 14 095 by 7. Then, write one 0.

14 095 × 70 = **986 650**

8 43 × 2 604 = ____

Method 1

Multiply ones

```
    1     1
  2 6 0 4
×     4 3
  7 8 1 2
```
2 604 × 3

Multiply tens

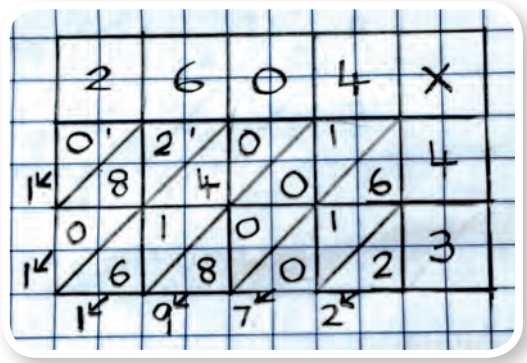
```
      2     1
    2 6 0 4
×       4 3
    7 8 1 2
1 0 4 1 6 0
```
2 604 × 40

Total up the products

```
      2 6 0 4
×         4 3
    1 7 8 1 2
+ 1 0 4 1 6 0
  1 1 1 9 7 2
```

Method 2

I use the Lattice method to multiply.



43 × 2 604 = **111 972**

Compare methods 1 and 2. Which method would you choose?

9 What is the product of 12 502 and 38?

12 502 × 38 = ____

Step 1

12 502 = 10 000 + 2 000 + 500 + 0 + 2
38 = 30 + 8

Step 2

×	10 000	2 000	500	0	2
30	300 000	60 000	15 000	0	60
8	80 000	16 000	4 000	0	16
Total	380 000	76 000	19 000	0	76

Step 3

```
  1 1
  3 8 0 0 0 0
    7 6 0 0 0
    1 9 0 0 0
+         7 6
  4 7 5 0 7 6
```

12 502 × 38 = **475 076**

The product of 12 502 and 38 is **475 076**.

10 30 708 × 19 = ____

×	30 000	0	700	0	8
10	300 000	0	7 000	0	80
9	27 000	0	6 300	0	72
Total	327 000	0	13 300	0	152

```
  3 2 7 0 0 0
    1 3 3 0 0
+         1 5 2
  3 3 0 4 5 2
```

What is the mistake made in the calculation? Discuss.

TEACHER'S NOTES

1.6.3

- Emphasise the importance of memorisation of times table for an easier multiplication process involving any two numbers.
- Surf https://www.ixl.com/math/grade-5/box-multiplication

11 7 815 × 21 = ☐

Estimate the answer first.

21 ⟶ 20

7 815 ⟶ 8 000

8 000 × 20 = 160 000

Calculate the actual answer.

$$\begin{array}{r} {\scriptstyle 1\ \ 1} \\ 7815 \\ \times\ \ 20 \\ \hline 156300 \end{array} \qquad \begin{array}{r} 7815 \\ \times\ \ 1 \\ \hline 7815 \end{array}$$

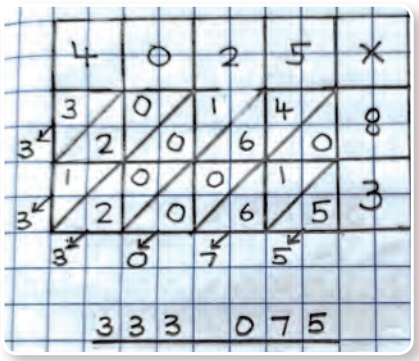
$$\begin{array}{r} {\scriptstyle 1\ \ 1} \\ 156300 \\ +\ \ 7815 \\ \hline 164115 \end{array}$$

21 is 20 and 1. Multiply 7 815 by 20 and 1. Then, total up the two products.

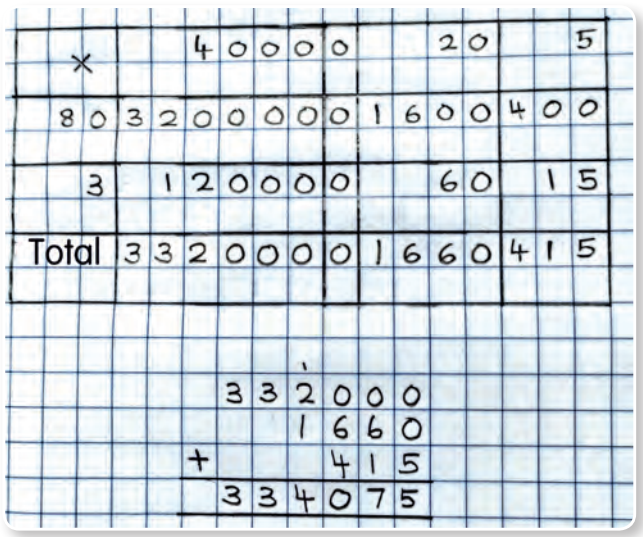
164 115 is nearer to 160 000. The answer is reasonable.

7 815 × 21 = **164 115**

12 4 025 × 83 = ☐



R



S

Which calculation is correct, R or S? Why?

BRAIN TEASER

3 0 7 0 × ☐ 2 = ☐☐☐☐☐☐

What is the smallest digit in ☐ so that the product is a 6-digit number?

1.6.3

- Prepare stations for multiplication activities involving all methods of multiplication. For examples, vertical form, lattice form, partition, and estimation to reinforce pupils' understanding.

13

76 400	as	809 000	as		as	180 020
764 × 100				8 016 × 54		

Fill in the blank boxes above.

SMART TRAIL

Tools/Materials 4 question cards (4 questions per card), 16 pieces of lattice multiplication cards, pens, stopwatch

Participants 4 pupils, 1 pupil (referee/timekeeper)

SCAN THIS

Task

1. Scan the QR code and answer all questions.

2. Hand in the lattice multiplication card to the referee when time ends.
3. The first pupil to answer all questions correctly, wins.

TRY THESE

1 Quick calculation.

(a) 12 640 × 10 = ____ (b) 8 674 × 100 = ____ (c) 359 × 1 000 = ____

(d) ____ × 100 = 273 400 (e) 1 000 × ____ = 948 000 (f) ____ × 10 = 684 090

2 Solve these.

(a) 51 402 × 2 = ____ (b) 34 180 × 5 = ____ (c) 6 × 20 964 = ____

(d) 7 × 80 417 = ____ (e) 207 340 × 3 = ____ (f) 169 049 × 4 = ____

3 Calculate the products.

(a) 9 724 × 60 = ____ (b) 10 408 × 17 = ____ (c) 29 006 × 26 = ____

TEACHER'S NOTES 1.6.3

- Give a question card and four pieces of lattice multiplication cards to each pupil according to groups.
- Modify questions for "Smart Trail" activity to suit pupils' abilities to enable full participation from the pupils.

DIVISION

1

MEMO

To: Store supervisor Date: 5 January 2020

Our company has received orders for 165 090 cosmetic bottles. Please record and handle this.

.....
Order Manager

Calculate the number of cosmetic bottles in a box.

165 090 ÷ 10 = ☐

Method 1

$$\frac{165\,090}{10} = 16\,509$$

Method 2

		0	1	6	5	0	9	0
10	)	1	6	5	0	9	0	
hundred thousands		− 0						
		1	6					
ten thousands		− 1	0					
			6	5				
thousands			− 6	0				
				5	0			
hundreds				− 5	0			
					0	9		
tens				−		0		
						9	0	
ones						− 9	0	
							0	

165 090 ÷ 10 = **16 509**

The number of cosmetic bottles in a box is **16 509**.

2 Divide 734 000 by 100.

734 000 ÷ 100 = ☐

734 000 ÷ 10 = 73 400
734 000 ÷ 100 = 7 340

734 000 ÷ 100 = **7 340**

3 802 000 ÷ ☐ = 802

802 000 ÷ 10 = 80 200
802 000 ÷ 100 = 8 020
802 000 ÷ 1 000 = 802

802 000 ÷ **1 000** = 802

Is the answer for 93 850 ÷ 10 the same as 938 500 ÷ 100? Explain.

1.6.4

- Encourage pupils to use the cancellation method when dividing any numbers by 10, 100 and 1 000.

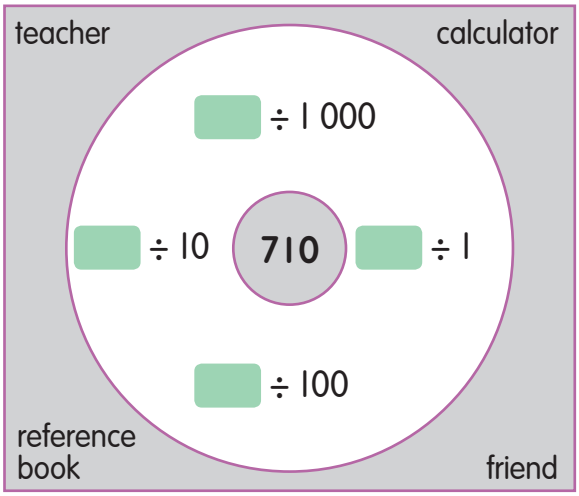
4 ☐ ÷ 100 = 6 780

Relate division to multiplication.

Simple example.
6 ÷ 2 = 3
6 = 3 × 2

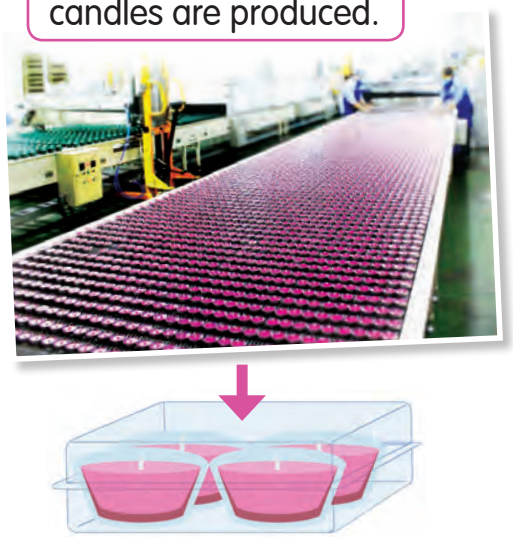
```
  6 7 8 0
×     1 0 0
-------------
  6 7 8 0 0 0
```

678 000 ÷ 100 = 6 780



Complete the circle map above.

5 205 184 scented candles are produced.



Each box is filled with 4 cases of scented candles to be marketed.

Now, divide 205 184 by 7.

How many boxes of scented candles will be marketed?

205 184 ÷ 4 = ☐

```
      0 5 1  2 9 6
   ---------------
4 ) 2 0 5  1 8 4
    -0
      2 0
    -2 0
        0 5
      -  4
         1  1
       -   8
            3 8
         - 3 6
              2 4
           - 2 4
                0
```

205 184 ÷ 4 = **51 296**

51 296 boxes of scented candles will be marketed.

TEACHER'S NOTES

1.6.4 • Emphasise that division is repeated subtraction.

6 Divide 871 976 by 56.

871 976 ÷ 56 = ▭

```
      0 1 5 5 7 1
56 ) 8 7 1 9 7 6
    −0
     8 7
    −5 6
     3 1 1
    −2 8 0
       3 1 9
     − 2 8 0
         3 9 7
       − 3 9 2
             5 6
           − 5 6
               0
```

Build 56 times table using a 3 x 3 grid.

56	112	168
224	280	336
392	448	504

SCAN THIS

871 976 ÷ 56 = **15 571**

7 412 378 ÷ 82 = ▭

	0	0	5	0	2	9
82)	4	41	412	23	237	738
	− 0	− 0	− 410	− 0	− 164	− 738
	4	41	2	23	73	0

412 378 ÷ 82 = **5 029**

8

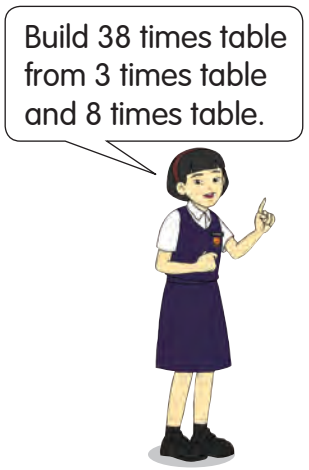
125 400 ÷ 20 = ▭ as ▭ = 3 135 as 125 400 ÷ 60 = ▭

Complete the blank boxes above.

• Refer to the QR Code to help pupils understand how to build 56 times table using a 3 × 3 grid.

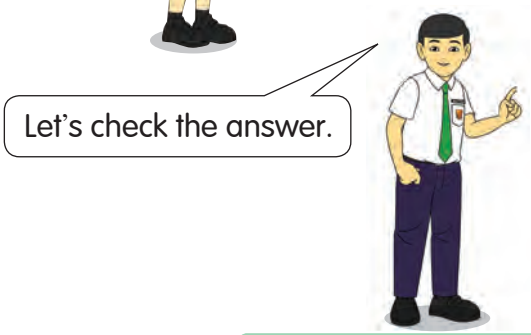
9 Calculate the quotient of 459 613 and 38.

459 613 ÷ 38 = ☐



3	8	38
3	08	38
6	16	76
9	24	114
12	32	152
15	40	190
18	48	228
21	56	266
24	64	304
27	72	342

```
      1 2 0 9 5
   ┌──────────
38 ) 4 5 9 6 1 3
     −3 8
       7 9
     − 7 6
         3 6
       −   0
         3 6 1
       − 3 4 2
             1 9 3
           − 1 9 0
                 3   remainder
```




```
          2 1
        1   7 4
      1 2 0 9 5
  ×           3 8
    1   1   1
      9 6 7 6 0
  + 3 6 2 8 5 0
    4 5 9 6 1 0
```

```
  4 5 9 6 1 0
+           3
  4 5 9 6 1 3
```

459 613 ÷ 38 = **12 095 remainder 3**

10 632 590 ÷ 100 = ☐

```
      6 3 2 5
   ┌──────────
100 ) 6 3 2 5 9 0
     −6 0 0
       3 2 5
     − 3 0 0
         2 5 9
       − 2 0 0
           5 9 0
         − 5 0 0
             9 0   remainder
```

632 590 ÷ 100

= 6 325 remainder 90

11 201 392 ÷ 51 = ☐

```
      3 9 4 8
   ┌──────────
51 ) 2 0 1 3 9 2
     −1 5 3
       4 8 3
     − 4 5 9
         2 4 9
       − 2 0 4
           4 5 2
         − 4 0 8
             4 4   remainder
```

201 392 ÷ 51

= 3 948 remainder 44

- Remind pupils that the value of the remainder should be less than the divisor.

12 124 010 ÷ 1 000 = ☐

$\frac{124\ 010}{1\ 000} = 124$ remainder 1

124 010 ÷ 1 000
= **124 remainder 1**

```
          1 2 4
1 000 ) 1 2 4 0 1 0
      - 1 0 0 0
        2 4 0 1
      - 2 0 0 0
          4 0 1 0
        - 4 0 0 0
              1 0
```

124 010 ÷ 1 000
= **124 remainder 10**

Which answer is correct? Discuss.

Relate 1 584 × 67 = 106 128 to complete the number sentence below.

☐ ÷ 67 = 1 584 remainder 17

1 Quick calculation.

(a) 126 400 ÷ 10 = ☐ (b) 306 500 ÷ 100 = ☐ (c) 891 000 ÷ 1 000 = ☐

(d) 392 100 ÷ ☐ = 3 921 (e) 519 000 ÷ ☐ = 519 (f) ☐ ÷ 10 = 8 453

2 Divide.

(a) 248 096 ÷ 2 = ☐ (b) 603 105 ÷ 5 = ☐ (c) 120 792 ÷ 6 = ☐

(d) 541 080 ÷ 8 = ☐ (e) 413 427 ÷ 7 = ☐ (f) 720 315 ÷ 9 = ☐

3 Calculate the quotient.

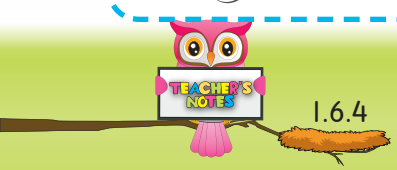
(a) 548 112 ÷ 16 = ☐ (b) 138 322 ÷ 23 = ☐ (c) 103 815 ÷ 45 = ☐

(d) 321 708 ÷ 51 = ☐ (e) 498 126 ÷ 61 = ☐ (f) 273 340 ÷ 79 = ☐

4 Solve these.

(a) 108 534 ÷ 10 = ☐ (b) 690 163 ÷ 100 = ☐ (c) 557 129 ÷ 1 000 = ☐

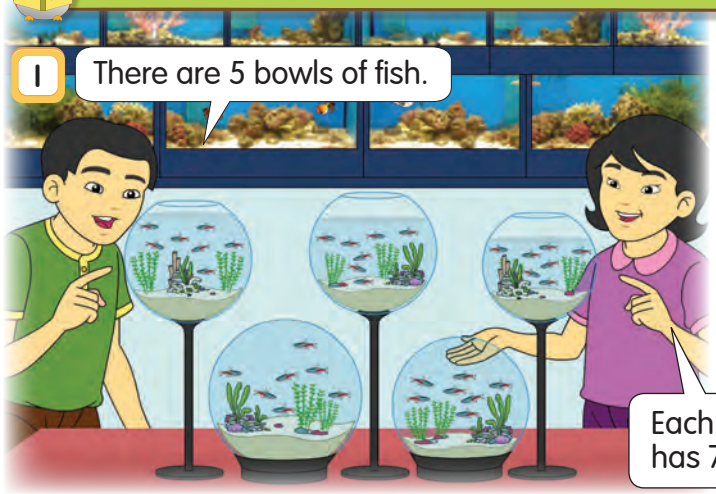
(d) 319 072 ÷ 18 = ☐ (e) 504 195 ÷ 27 = ☐ (f) 987 610 ÷ 99 = ☐



1.6.4

- Emphasise that the cancellation method cannot be used for division with remainder involving any numbers with 10, 100 and 1 000.
- Encourage pupils to check answers through multiplication using calculator for "Try These" questions.

UNKNOWN IN MULTIPLICATION



The total number of fish is ***m***. Find the value of ***m***.

$5 \times 7 = m$
$m = 5 \times 7$
$m = 35$

The value of ***m*** is **35**.

2 $k \times 12 = 36$
What is the value of ***k***?

Relate multiplication to division.

Simple example.
$2 \times 3 = 6$
$2 = 6 \div 3$

$k \times 12 = 36$
$k = 36 \div 12$
$k = 3$

$3 \times 12 = 36$

The value of ***k*** is **3**.

3 $15 \times p = 60\,000$
What is the value of ***p***?

Simple example.
$5 \times 4 = 20$
$4 = 20 \div 5$

$15 \times p = 60\,000$
$p = 60\,000 \div 15$
$p = 4\,000$

$15 \times 4\,000 = 60\,000$

The value of ***p*** is **4 000**.

TRY THESE

Find the values of ***h***.

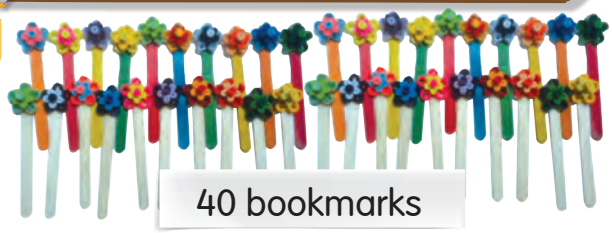
(a) $2 \times 9 = h$
(b) $h \times 7 = 105$
(c) $50 \times h = 20\,000$
(d) $13 \times h = 65\,260$

Given that $20 \times 5 = n$. Find the value of ***n***.

- Carry out suitable simulation activities using concrete objects to enhance pupils' understanding in finding unknown values.
- Explain "simplify a case" strategy using small values to find unknown.

UNKNOWN IN DIVISION

1



Lucy will distribute all the bookmarks equally to 8 groups.

Each group will receive q bookmarks. Find the value of q.

$40 \div 8 = q$

$q = 40 \div 8$

$q = 5$

The value of q is **5**.

2 $1\,800 \div m = 18$

What is the value of m?

Simple example.
$8 \div 2 = 4$
$2 = 8 \div 4$

$1\,800 \div m = 18$

$m = 1\,800 \div 18$

$m = 100$

$1\,800 \div 100 = 18$

The value of m is **100**.

3 $s \div 24 = 3\,190$

What is the value of s?

Relate division to multiplication.

Simple example.
$8 \div 2 = 4$
$8 = 4 \times 2$

$s \div 24 = 3\,190$

$s = 3\,190 \times 24$

$s = 76\,560$

$76\,560 \div 24 = 3\,190$

The value of s is **76 560**.

Given that $f \div 13 = 893$. Find the value of f.

TRY THESE

What are the values of w?

(a) $8 \div 4 = w$ (b) $w \div 1\,000 = 7$ (c) $700\,029 \div 9 = w$ (d) $1\,020 \div w = 68$

TEACHER'S NOTES 1.8.2

- Carry out suitable simulation activities to enhance pupils' understanding in finding unknown values.

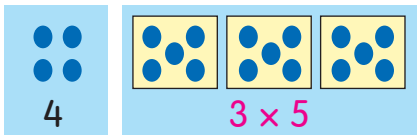
ADDITION AND MULTIPLICATION

1

Azmir has 4 toy cars initially.

What is the total number of Azmir's toy cars?

$4 + 3 \times 5 =$ ☐



$4 + 3 \times 5 = 4 + 15$

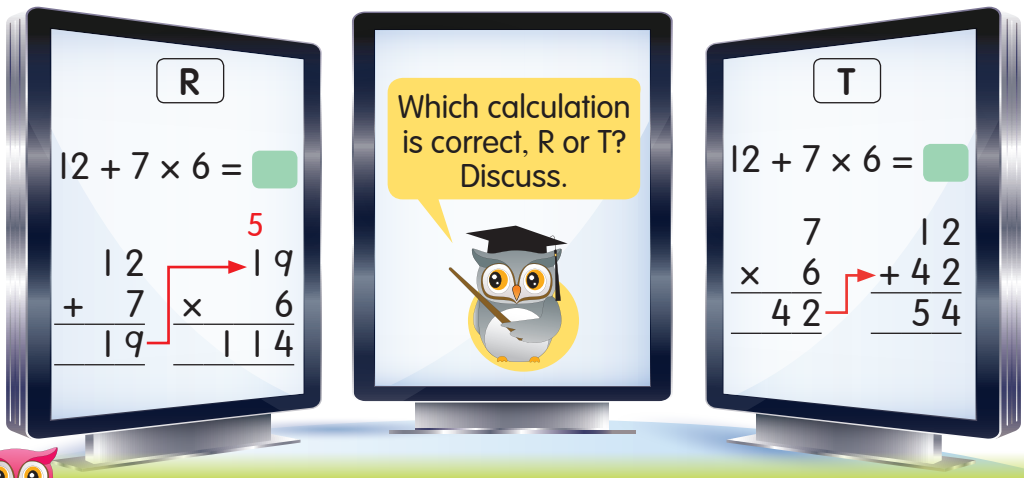
$= 19$

Multiply to find the total number in groups first. Then, add.

$4 + 3 \times 5 =$ **19**

The total number of Azmir's toy cars is **19**.

2



TEACHER'S NOTES

1.7.1 (i)

- Carry out simulation activities on addition and multiplication using Dienes blocks to enhance pupils' understanding.

3 I put in 4 pieces of RM5 notes and a piece of RM50 note.

What is the total amount of money Yi Zheng has?

4 × RM5 + RM50 = ☐

4 × RM5

RM50

4 × RM5 + RM50 = RM20 + RM50
= RM70

4 × RM5 + RM50 = **RM70**

The total amount of money Yi Zheng has is **RM70**.

4

Scores of Za'ba group members

Name	Nazmi	Vidya	Kath
Round 1	150	150	150
Round 2	120	120	120

Calculate the total score of Za'ba group.

3 × (150 + 120) = ☐

Step 1

```
  150
+ 120
  270
```

Step 2

```
   2
  270
×   3
  810
```

3 × (150 + 120) = **810**

The total score of Za'ba group is **810**.

Solve the operations in the brackets first.

Can 3 × 150 + 3 × 120 = ☐ represent the above situation? Discuss.

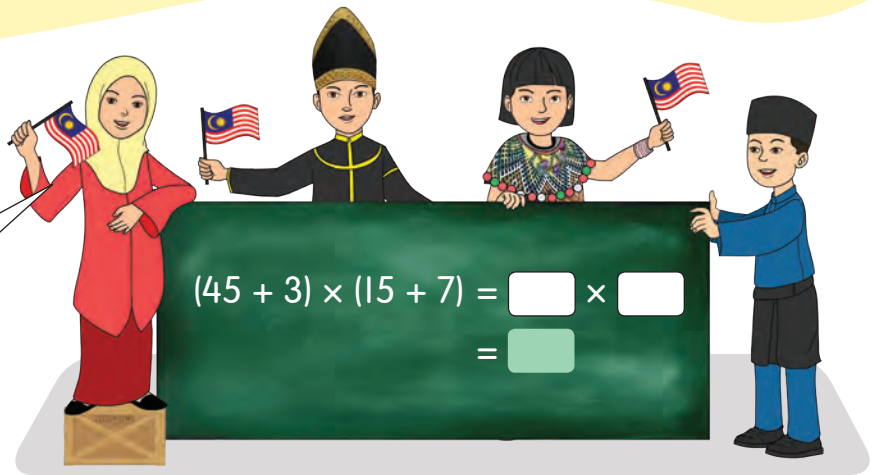
BRAIN TEASER

The picture shows monthly savings by Nina and Dini. Which number sentence represents their total savings in 6 months?

RM17 + RM19 × 6 = RM131

6 × (RM17 + RM19) = RM216

5

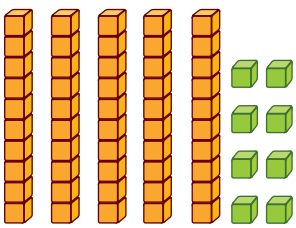


TRY THESE

1 Solve these.

(a) 6 + 4 × 2 = ☐

(b) 5 × 10 + 8 = ☐



(c) 84 + 6 × 109 = ☐ (d) 209 + 530 × 7 = ☐ (e) 8 905 × 4 + 1 902 = ☐

2 Calculate.

(a) (109 + 15) × 7 = ☐ (b) 15 × (34 + 802) = ☐ (c) 80 × (13 + 7) = ☐

(d) (120 + 98) × (32 + 7) = ☐ (e) (4 091 + 128) × (14 + 80) = ☐

TEACHER'S NOTES

1.7.1 (i) • Modify questions 2d and 2e using smaller values to suit pupils' abilities.

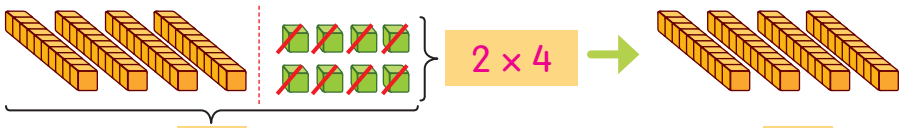
SUBTRACTION AND MULTIPLICATION

1

48 cupcakes

How many cupcakes are left?

$48 - 2 \times 4 =$ ☐



Total up the number of cupcakes taken by 2 persons first.

$48 - 2 \times 4 = 48 - 8$
$= 40$

Then, subtract the amount from the original number of cupcakes.

Solve multiplication first before subtraction.

TIPS

$48 - 2 \times 4 =$ **40**

There are **40** cupcakes left.

2 $790 - 8 \times 32 =$ ☐

$$\begin{array}{r} {\scriptstyle 8\,10} \\ 7\,\cancel{9}\,\cancel{0} \\ -\quad 8 \\ \hline 7\,8\,2 \end{array}$$

$$\begin{array}{r} {\scriptstyle 2} \\ 7\,8\,2 \\ \times \quad 3\,2 \\ \hline 1\,5\,6\,4 \\ +\,2\,3\,4\,6\,0 \\ \hline 2\,5\,0\,2\,4 \end{array}$$

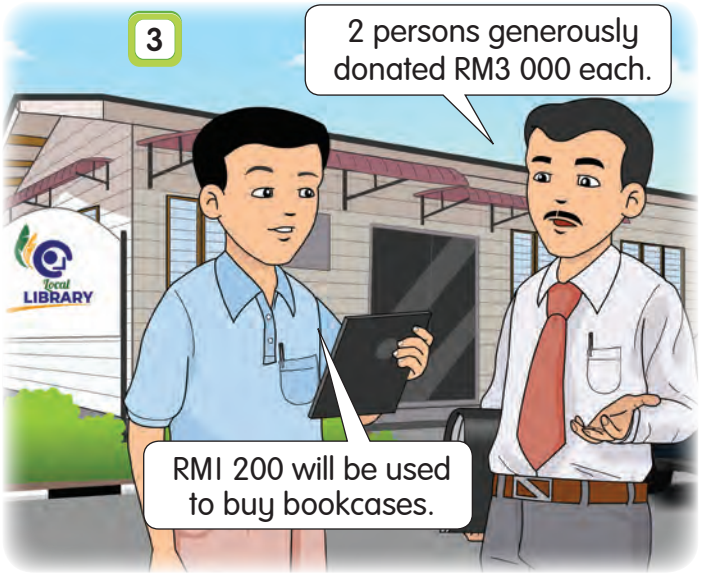
Is this method of calculation correct? Discuss.

TEACHER'S NOTES

1.7.1 (ii)

- Encourage pupils to use concrete materials such as draughts pieces to reinforce the concept of subtraction and multiplication.

3



Find the balance after buying the bookcases.

2 × RM3 000 – RM1 200 = ☐

Step 1

RM3 000
× 2
RM6 000

Step 2

5 10
RM6 000
– RM1 200
RM4 800

2 × RM3 000 – RM1 200 = **RM4 800**

The balance after buying the bookcases is **RM4 800**.

4 (100 – 20) × 3 = ☐

Step 1

100
– 20
80

Step 2

80
× 3
240

(100 – 20) × 3 = **240**

5 (300 – 25) × (24 – 11) = ☐

(300 – 25) × (24 – 11)

= 275 × 13

= 3 575

2 1
275
× 13
825
+2 750
3 575

Operations in the brackets must be solved first.

TIPS

(300 – 25) × (24 – 11) = **3 575**

60 – 17 × 3 = 129

The number sentence above is wrong. Correct the number sentence.

Solve these.

(a) 16 – 2 × 5 = ☐

(b) 32 × 7 – 102 = ☐

(c) 900 – 215 × 4 = ☐

(d) 24 139 – 916 × 8 = ☐

(e) (407 – 93) × 6 = ☐

(f) 809 × (82 – 56) = ☐

(g) (3 010 – 59) × (200 – 195) = ☐

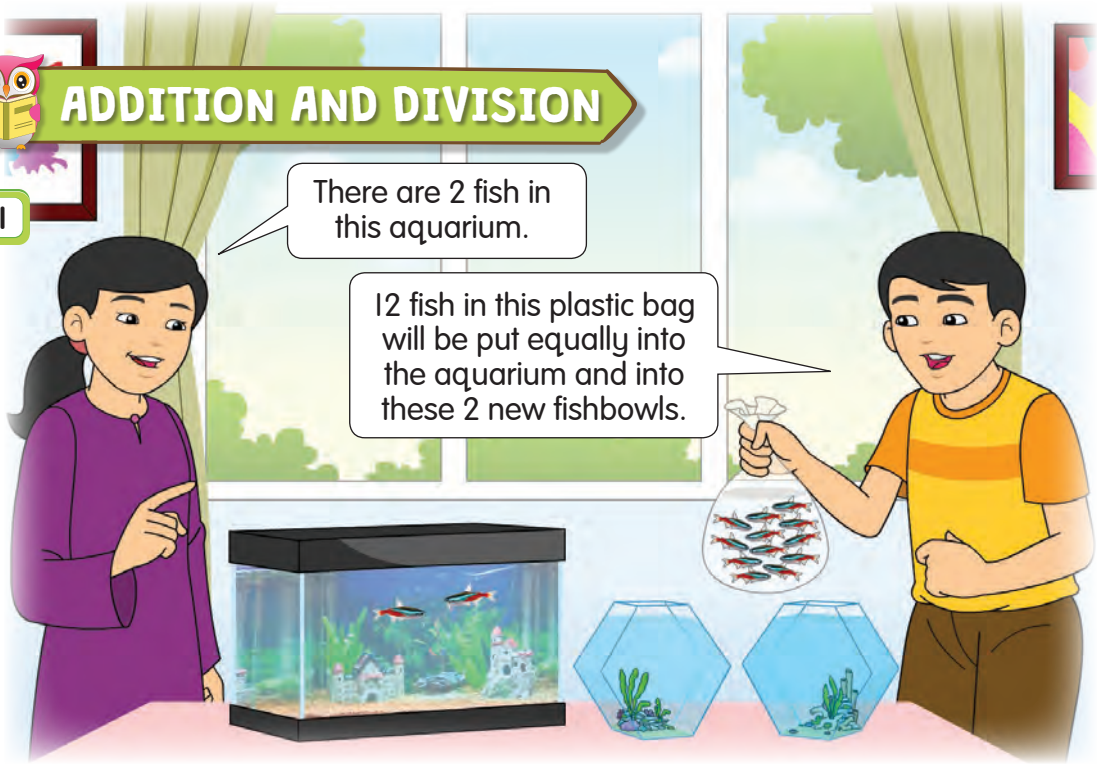
(h) (7 103 – 2 016) × (500 – 431) = ☐

TEACHER'S NOTES

1.7.1 (ii) • Emphasise that operations in the brackets must be solved first.

ADDITION AND DIVISION

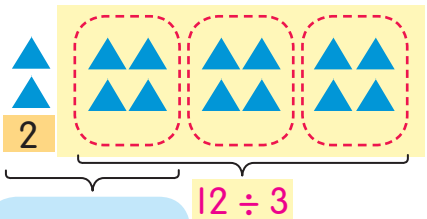
1



What is the total number of fish in the aquarium?

$2 + 12 \div 3 =$ ☐

First, find the number of fish to be divided equally.



Number of fish in the aquarium.

Then, add 2 to get the total number of fish in the aquarium.

$2 + 12 \div 3 = 2 + 4$

$= 6$

Solve division first, followed by addition.

$2 + 12 \div 3 =$ **6**

The total number of fish in the aquarium is **6**.

2

$40 + 18 \div 2 = \square$

$40 + 18 \div 2 = 40 + 9$

$= 49$

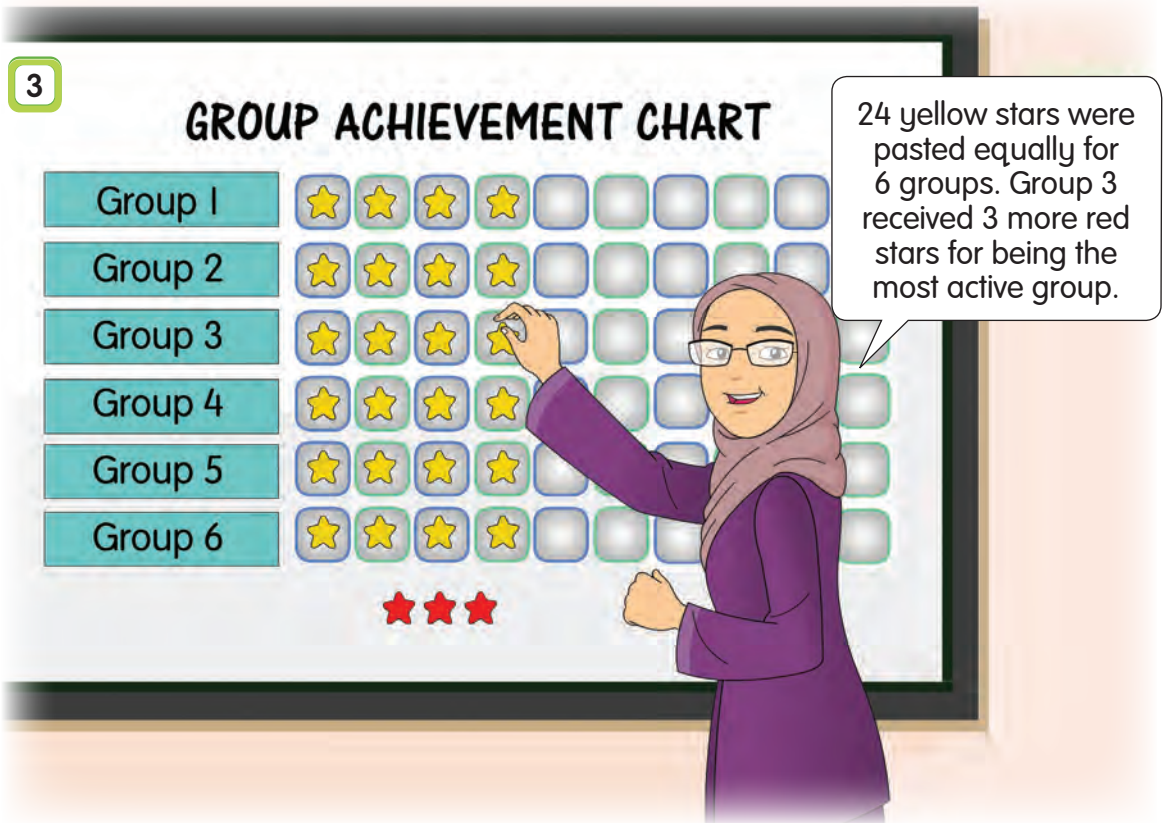
$40 + 18 \div 2 = \square$

$40 + 18 \div 2 = 58 \div 2$

$= 29$

Which calculation is correct? Why?

3



What is the total number of stars for group 3?

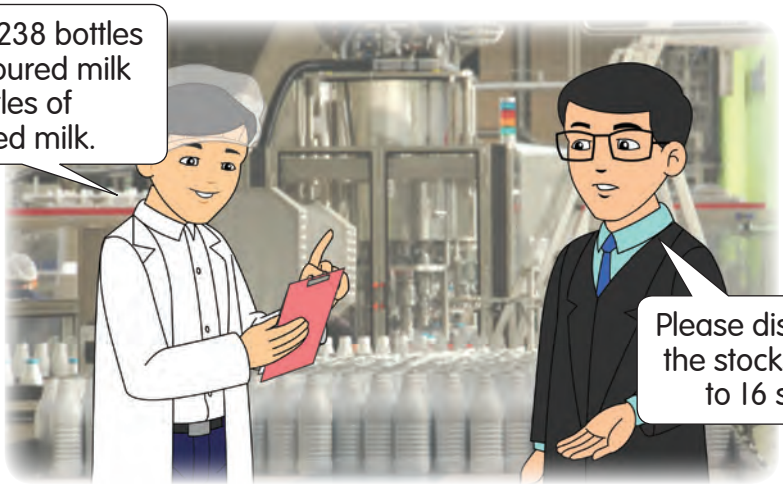
$24 \div 6 + 3 = \square$

$24 \div 6 + 3 = 4 + 3$

$= 7$

$24 \div 6 + 3 = \mathbf{7}$

The total number of stars for group 3 is **7**.



4 What is the total number of bottles of chocolate-flavoured milk and vanilla-flavoured milk will each shop receive?

(1 238 + 682) ÷ 16 = ☐

Step 1

$$\begin{array}{r} {\scriptstyle 1\ 1\ \ \ } \\ 1\,238 \\ +\ \ 682 \\ \hline 1\,920 \end{array}$$

Step 2

$$\begin{array}{r} 0120 \\ 16\overline{)\,1920} \\ -\ 0\ \downarrow \\ \hline 19 \\ -\ 16\ \downarrow \\ \hline 32 \\ -\ 32\ \downarrow \\ \hline 00 \\ -\ \ 0 \\ \hline 0 \end{array}$$

TIPS

Solve the operations in the brackets first.

(1 238 + 682) ÷ 16 = **120**

The total of **120** bottles of chocolate-flavoured milk and vanilla-flavoured milk will be received by each shop.

Try to solve this question.
(231 + 109) ÷ (10 + 7) = ☐

TRY THESE

Solve these.

(a) 7 + 72 ÷ 3 = ☐

(b) 64 ÷ 8 + 209 = ☐

(c) 2 835 ÷ 7 + 914 = ☐

(d) 12 083 + 1 710 ÷ 10 = ☐

(e) (393 + 15) ÷ 8 = ☐

(f) 29 624 ÷ (16 + 12) = ☐

(g) (2 085 + 1 793) ÷ 14 = ☐

(h) (487 000 + 29 000) ÷ (51 + 49) = ☐

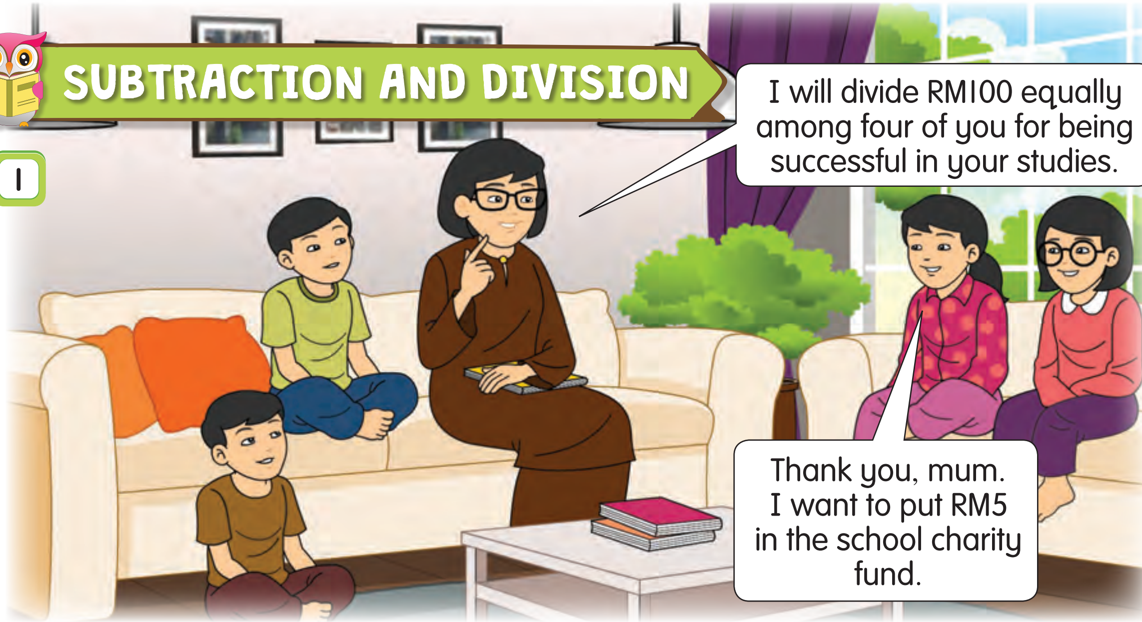
TEACHER'S NOTES

1.7.1 (iii)

- Encourage pupils to build times tables so that they can easily divide any numbers by 2-digit numbers.

SUBTRACTION AND DIVISION

1



What is the balance of Yana's money?

RM100 ÷ 4 – RM5 = ☐

RM100 ÷ 4 – RM5 = RM25 – RM5
= RM20

RM100 ÷ 4 – RM5 = **RM20**

The balance of Yana's money is **RM20**.

Solve division first, followed by subtraction.

TIPS

2 8 000 – 1 422 ÷ 18 = ☐

```
       7 9
18 ) 1 4 2 2
   – 1 2 6
       1 6 2
     – 1 6 2
           0
```

```
   9  9
 7 10 10 10
 8  0  0  0
 –     7  9
 7  9  2  1
```

8 000 – 1 422 ÷ 18 = **7 921**

3 RM357 – RM175 ÷ 7 = ☐

```
    2 15
 RM 3 5 7
– RM 1 7 5
 RM 1 8 2
```

```
    RM   2 6
7 ) RM 1 8 2
     – 1 4
         4 2
       – 4 2
           0
```

✗

Why is the answer incorrect? Discuss.

TEACHER'S NOTES 1.7.1 (iv)

4 Miss Ai Wen, we had 2 900 of face masks in stocks and 2 015 have been sold.

Calculate the number of packets of face masks.

(2 900 – 2 015) ÷ 5 = ☐

Step 1

```
      9
   8 10 10
   2 9 0 0
 – 2 0 1 5
   ---------
     8 8 5
```

Step 2

```
     1 7 7
  5 ) 8 8 5
    – 5
    ---
      3 8
    – 3 5
    -----
        3 5
      – 3 5
      -----
          0
```

(2 900 – 2 015) ÷ 5 = **177**

The number of packets of face masks is **177** packets.

5 (4 594 – 178) ÷ (47 – 23) = ☐

(4 594 – 178) ÷ (47 – 23)

= 4 416 ÷ 24

= 184

(4 594 – 178) ÷ (47 – 23) = **184**

```
      1 8 4
  24 ) 4 4 1 6
     – 2 4
     -----
       2 0 1
     – 1 9 2
     -------
         9 6
       – 9 6
       -----
           0
```

Solve the operations in the brackets first.

8 400 ÷ (100 – 75) = ☐

Choose the answer below.

A 9 B 12 C 336 D 560

TRY THESE

Solve these.

(a) 35 – 12 ÷ 3 = ☐

(b) 478 – 104 ÷ 13 = ☐

(c) 605 ÷ 5 – 57 = ☐

(d) 1 008 ÷ 9 – 36 = ☐

(e) (620 – 96) ÷ 4 = ☐

(f) 5 040 ÷ (100 – 85) = ☐

(g) (7 120 – 2 400) ÷ 8 = ☐

(h) (950 – 490) ÷ (48 – 28) = ☐

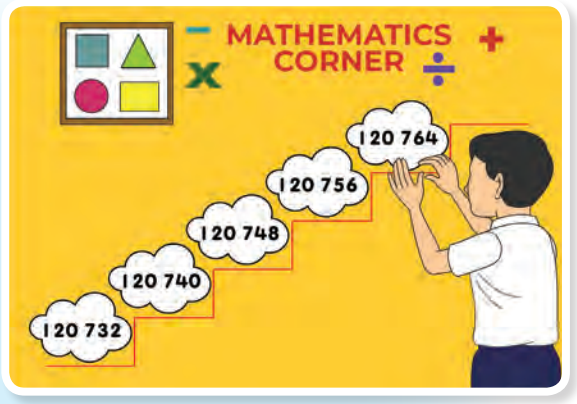
(i) (69 752 – 8 323) ÷ (100 – 53) = ☐

1.7.1 (iv)

- Conduct an error analysis on the calculation process done by pupils. Carry out follow-up action to address pupils' weaknesses.

KPM

SOLVE THE PROBLEMS



1 Hisham pasted five number cards at the mathematics corner.

120 732 120 740 120 748 120 756 120 764

What is the sixth number card he would paste?

Understand the problem

- Five cards pasted.
  120 732, 120 740, 120 748, 120 756, 120 764
- What is the sixth number?

Plan the strategy

Identify the number pattern.

+ 8 + 8 + 8 + 8 + 8

12 732	120 740	120 748	120 756	120 764	?

120 732 + 8 = 120 740 120 740 + 8 = 120 748

Solve

120 764 + 8 = ☐

```
    1
  120764
+     8
  120772
```

Check

```
    6 12
  120772
-     8
  120764
```

120 764 + 8 = **120 772**

The sixth number card he would paste is **120 772**.

What is the ninth number in the number pattern above?

TEACHER'S NOTES

1.9.1 • Explain and emphasise problem-solving steps using Polya's model.

2 The table below shows the number of greeting cards printed for a variety of occasions.

Greeting card	Teacher's Day	Father's Day	Mother's Day
Number of cards (pieces)	104 500	3 500 more than Teacher's Day cards	12 600 more than Father's Day cards

What is the number of Mother's Day cards?

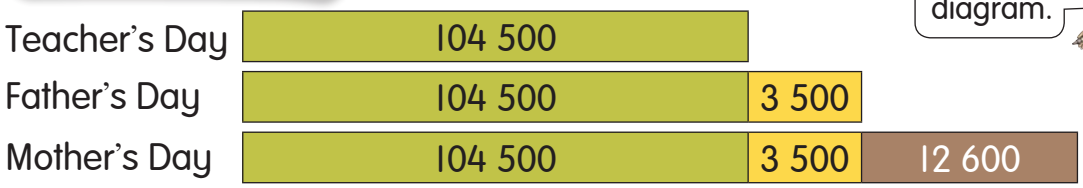
Understand the problem

Teacher's Day card: 104 500

Father's Day card: 3 500 more than Teacher's Day cards

Mother's Day card: 12 600 more than Father's Day cards

Plan the strategy



Solve

104 500 + 3 500 + 12 600 = ☐

$$\begin{array}{r} {\scriptstyle 1\ 1\ \ \ \ \ \ } \\ 104\,500 \\ 3\,500 \\ +\ 12\,600 \\ \hline 120\,600 \end{array}$$

Check

$$\begin{array}{r} {\scriptstyle 1\ 10\ \ \ \ \ \ } \\ 120\,600 \\ -\ 12\,600 \\ \hline 108\,000 \end{array} \qquad \begin{array}{r} {\scriptstyle 7\ 10\ \ \ \ \ \ } \\ 108\,000 \\ -\ 3\,500 \\ \hline 104\,500 \end{array}$$

104 500 + 3 500 + 12 600 = **120 600**

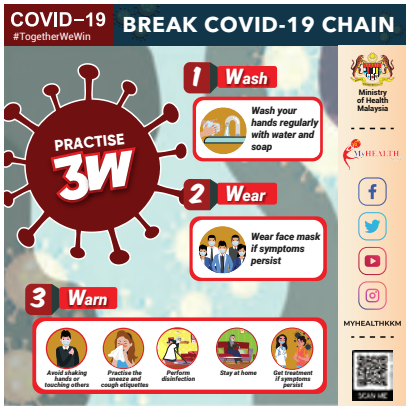
The number of Mother's Day cards is **120 600** pieces.

Calculate the difference in the number of Mother's Day cards and Teacher's Day cards.

1.9.2

- Train pupils to understand keywords in determining the operations for the given problem.

3 The Health Department distributed awareness brochures on COVID-19 to five districts. District A, B, C and D each received 78 906, 108 324, 5 092 and 782 pieces respectively. The total number of brochures distributed to all districts is 273 353 pieces. Calculate the number of brochures distributed to District E.



Source: facebook.com/kementerian kesihatanmalaysia/photos

Understand the problem

Underline important information and fill in the table.

District	Number of brochures (pieces)
A	78 906
B	108 324
C	5 092
D	782
E	?
Total	273 353

Plan the strategy

78 906 + 108 324 + 5 092 + 782 + ☐ = 273 353

Solve

$$\begin{array}{r} {\scriptstyle 2\ 2\ 2\ 1\ \ } \\ 78906 \\ 108324 \\ 5092 \\ +\ \ 782 \\ \hline 193104 \end{array}$$

$$\begin{array}{r} {\scriptstyle 1\ 17\ \ \ 4\ 13} \\ 27\not{7}3\ 3\not{5}\not{3} \\ -\ 193\ 104 \\ \hline 80249 \end{array}$$

Check

Check the answer using calculator or subtraction.

$$\begin{array}{r} 78906 \\ 108324 \\ 5092 \\ 782 \\ +\ 80249 \\ \hline 273353 \end{array}$$

78 906 + 108 324 + 5 092 + 782 + **80 249** = 273 353

The number of brochures distributed to District E is **80 249** pieces.

TEACHER'S NOTES

1.9.2

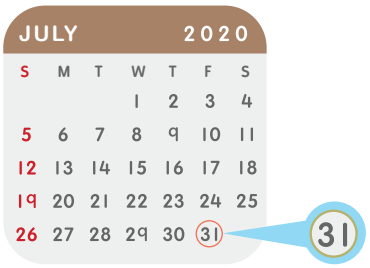
- Guide pupils to determine and underline important information.
- Instil moral values in healthcare such as preventive measures to avoid infection.

4 Salim's Bakery supplies 3 480 bread of different flavours per day. Calculate the total number of bread supplied in July.

Solution

Given 3 480 bread supplied per day.

Asked for Total number of bread supplied in July.



JULY					2020	
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

31

There are 31 days in July.

Number sentence $31 \times 3\,480 =$ ☐

Calculate

$$\begin{array}{r} {\scriptstyle 1\ 2\ \ } \\ 3\,4\,8\,0 \\ \times \quad 3\,1 \\ \hline 3\,4\,8\,0 \\ +1\,0\,4\,4\,0\,0 \\ \hline 1\,0\,7\,8\,8\,0 \end{array}$$

Check

1 day → 1 × 3 480 bread = 3 480 bread

10 days → 10 × 3 480 bread = 34 800 bread

		1 2
10 days	→	34 800
10 days	→	34 800
10 days	→	34 800
+ 1 day	→ +	3 480
31 days		107 880

$31 \times 3\,480 =$ **107 880**

The total number of bread supplied in July is **107 880**.

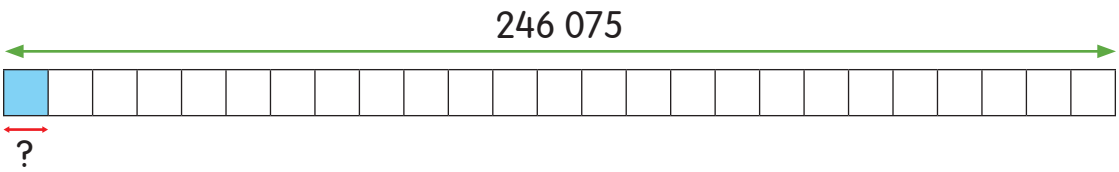
How much bread are supplied in September if Salim's Bakery closes for 2 days due to public holidays?

5 In conjunction with Chinese New Year, orange producers distributed 246 075 boxes of oranges equally to 25 suppliers. How many boxes did each supplier get?

Solution

Given 246 075 boxes of oranges were distributed equally to 25 suppliers.

Asked for Number of boxes for each supplier.



Number sentence 246 075 ÷ 25 = ☐

Calculate

```
   0 0 9 8 4 3
25)2 4 6 0 7 5
  −0
    2 4
  −  0
    2 4 6
  −2 2 5
      2 1 0
    −2 0 0
        1 0 7
      −1 0 0
            7 5
          −7 5
            0
```

Check

```
      1
    4 2 1
      9 8 4 3
×         2 5
    1 1 1
      4 9 2 1 5
+ 1 9 6 8 6 0
    2 4 6 0 7 5
```

246 075 ÷ 25 = **9 843**

Each supplier gets **9 843** boxes of oranges.

6 42 participants registered online for the Young Entrepreneurs Camp each day. A total number of 252 participants registered in p days. What is the value of p?

Solution

Given 42 participants registered online for the Young Entrepreneurs Camp each day. A total number of 252 participants registered in p days.

Asked for value of p

Calculate

1 day → $1 \times 42 = 42$

p days → $p \times 42 = 252$

Number sentence

$p \times 42 = 252$

Simple example.

$2 \times 3 = 6$

$2 = 6 \div 3$

$p \times 42 = 252$

$p = 252 \div 42$

$p = 6$

$$\begin{array}{r} 6 \\ 42\overline{)\,252} \\ -252 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} {\scriptstyle 1} \\ 42 \\ \times\ \ 6 \\ \hline 252 \end{array}$$

$6 \times 42 = 252$

The value of p is **6**.

7 360 bags of fertilizer were distributed equally to m smallholders. Each smallholder received 30 bags. What is the value of m?

Solution

360 bags of fertilizer distributed equally to m smallholders. Each smallholder received 30 bags. → Find the value of m. → $360 \div m = 30$

$360 \div m = 30$

$m = 360 \div 30$

$m = 12$

$$12\overline{)\,360} = 12$$

Check

$12 \times 30 = 360$

$360 \div 12 = 30$

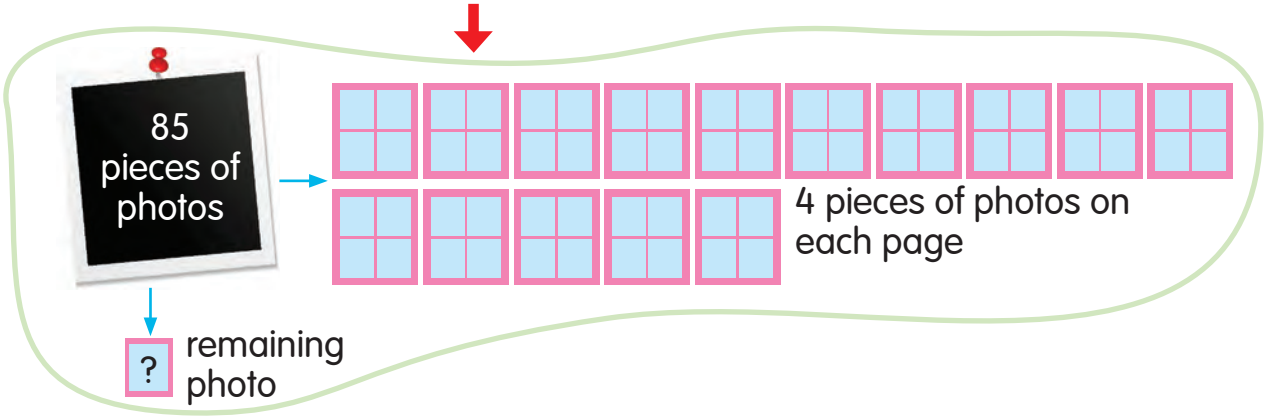
The value of m is **12**.

8 Aubrey has 85 pieces of photos. She arranges 4 pieces of photos on each page of her album. The album contains 15 pages. Will there be 25 remaining number of photos that cannot be arranged in the album? Prove it.

Solution

85 pieces of photos.
4 pieces of photos on each page.
The album has 15 pages.

Will there be 25 remaining number of photos that cannot be arranged?



$85 - 15 \times 4 = \square$

$85 - 15 \times 4 = 85 - 60$
$= 25$

$15 \times 4 + 25 = 60 + 25$
$= 85$

$85 - 15 \times 4 = \mathbf{25}$

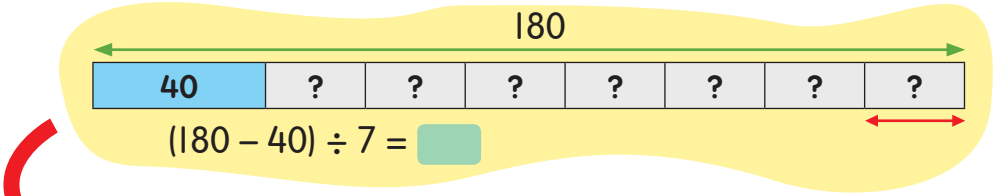
Yes, the remaining number of photos that cannot be arranged in the album is **25**.

The remaining photos are arranged in a similar album. How many pages are still empty?

9 In conjunction with World Children's Day, zoo authorities gave out 180 free tickets. 40 tickets were given to school A. The remaining tickets were distributed equally among 7 kindergartens. How many tickets did each kindergarten receive?

Solution

- 180 free tickets given out.
- 40 tickets given to school A.
- Remaining tickets distributed equally to 7 kindergartens.
- Number of tickets received by each kindergarten.



$(180 - 40) \div 7 =$ ☐

Step 1

$$\begin{array}{r} 180 \\ -\ 40 \\ \hline 140 \end{array}$$

Step 2

$$\begin{array}{r} 20 \\ 7\overline{)140} \\ -14\downarrow \\ \hline 00 \\ -\ 0 \\ \hline 0 \end{array}$$

Check

$20 \times 7 + 40 = 140 + 40$
$= 180$

$(180 - 40) \div 7 =$ **20**

The number of tickets received by each kindergarten is **20**.

TRY THESE

Solve the following problems.

(a) Li Wei counts in thousands. She starts counting from 105 640 up to 112 640. Among the following numbers, which one would she mention?

104 640 | 110 640 | 113 640 | 115 640

(b) Rania is writing a number pattern in descending order by ten thousands. She starts with 649 280.

(i) What is the fifth number that Rania will write?

(ii) Round off the third number to the nearest hundred thousand.

(c) The table shows the number of orders of food containers and water containers by three supermarkets L, M and N.

Supermarket	Number of food containers and water containers
L	120 718
M	6 790 more than supermarket L
N	7 020 more than supermarket M

What is the total number of food containers and water containers ordered by all three supermarkets?

(d) Enak Biscuits Factory produced 275 500 packets of biscuits. 140 850 packets were distributed to several supermarkets. 850 packets were donated to orphanages. How many packets were left?

(e) A battery factory produces 8 970 batteries in a day. Calculate the total number of batteries produced in 4 weeks.

TEACHER'S NOTES

1.9.1
1.9.2

- Provide more questions that are simple and interesting according to pupils' abilities.

(f) In conjunction with Flag Day of St. John Ambulance Malaysia, 420 689 stickers were distributed equally to 97 schools. How many stickers were received by each school?

(g) Puan Ashwani fills w pieces of chocolate equally into 28 jars. Each jar has 60 pieces of chocolate. What is the value of w?

(h) 15 papaya seedlings are planted in a row. There are k rows of seedlings. The total number of seedlings is 180. What is the value of k?

(i) 

David collected 54 durians at his orchard. 18 durians were eaten by his family. The remaining durians were equally distributed to his 6 neighbours. How many durians did each neighbour receive?

(j) A school has 1 450 girls and 917 boys. Each pupil is given 5 game tokens in conjunction with World Environment Day. What is the total number of tokens given to all the pupils in the school?

(k) Bella has RM4 530 as savings. Her father equally distributes RM150 to Bella and 2 of her siblings. How much money does Bella have now?

(l) Jamily withdraws RM1 200 from his salary account. He spends RM450. The balance is placed equally into 6 envelopes for his children's tuition fees. How much money is in each envelope?

TEACHER'S NOTES

1.9.2
1.9.3

- Carry out a variety of problem-solving activities such as solving problems in stations and Gallery Walk.

TRY IT AGAIN

1 Write the number in numerals or in words.

(a) 125 098 (b) 640 203 (c) 900 071

(d) two hundred six thousand and eighty-one

(e) four hundred fifteen thousand and seven

2 State the place value and digit value for the underlined digits.

	Number	Place value	Digit value
(a)	150 962		
(b)	300 740		
(c)	410 203		

	Number	Place value	Digit value
(d)	703 185		
(e)	586 749		
(f)	982 060		

3 Complete the answers.

(a) 260 192 = 200 000 + 60 000 + 100 + ☐ + ☐

(b) ☐ = 80 + 500 000 + 700

(c) 813 608 = ☐ + 1 ten thousands + 3 thousands + ☐ + 8 ones + ☐

(d) ☐ = 5 ones + 3 ten thousands + 7 hundred thousands + 0 hundreds + 2 thousands + 0 tens

4 State the prime numbers from the number cards below.

9	17	39	41	53	65	73	81	89

5 Write "is more than" or "is less than".

(a) 762 185 ☐ 726 851 (b) 492 073 ☐ 492 703

(c) 108 648 ☐ 180 486 (d) 987 001 ☐ 978 995

6 Arrange the numbers in ascending and descending orders.

(a) 309 120, 309 050, 309 415, 309 827

(b) 910 650, 901 328, 907 995, 904 825

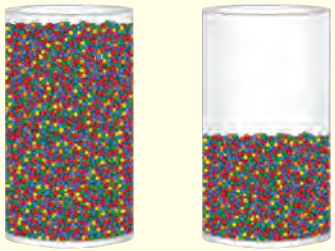
7 Complete the possible values for the number sequences below.

(a) 620 198, ☐, 620 201, ☐, 620 210

(b) 807 356, 850 123, ☐, 871 000, ☐, 900 000

TEACHER'S NOTES 1.1.1, 1.1.2, 1.2.1

8 Estimate the following quantities.

a 

120 000 beads ____

b 

15 000 g ____

9 Complete the number patterns below. State each pattern.

a) 505 120, 505 124, 505 128, ____, ____

b) 198 780, ____, 198 580, 198 480, ____, ____

c) 303 409, 403 409, ____, 603 409, ____, 803 409

d) 869 007, 859 007, ____, ____, 829 007, ____

10 a) Round off the following numbers to the nearest ten thousand and hundred thousand.

i) 417 831 ii) 283 095 iii) 643 742 iv) 995 210

b) Give three numbers that become 800 000 when rounded off to the nearest hundred thousand.

11 Solve these.

a) 6 796 + 801 273 = ____

b) 109 + 5 027 + 493 089 = ____

c) 49 + 505 + 482 014 + 9 918 = ____

d) 80 713 + 4 160 + 392 042 + 896 + 27 = ____

e) 791 008 – 39 580 = ____

f) 620 090 – 49 178 – 769 = ____

g) 251 730 – 198 – 103 918 – 45 520 = ____

12 Calculate.

a) 64 730 × 10 = ____

b) 5 009 × 100 = ____

c) 312 × 1 000 = ____

d) 6 × 59 824 = ____

e) 8 907 × 41 = ____

f) 53 × 13 098 = ____

g) 832 × ____ = 832 000

h) ____ × 100 = 168 000

i) ____ = 3 906 × 40

13 Find the values of ☐.

(a) 482 000 ÷ 10 = ☐
(b) 754 000 ÷ 100 = ☐
(c) 802 000 ÷ 1 000 = ☐
(d) 672 108 ÷ 4 = ☐
(e) 737 604 ÷ 36 = ☐
(f) 336 042 ÷ 98 = ☐
(g) 297 890 ÷ 100 = ☐
(h) ☐ ÷ 1 000 = 204 remainder 82
(i) 395 108 ÷ 19 = ☐
(j) 609 512 ÷ 85 = ☐

14 Complete the number sentences.

(a) ☐ + 329 678 = 500 000
(b) 650 190 – ☐ = 89 720
(c) 95 702 + ☐ = 207 193
(d) ☐ – 127 094 = 439 058

15 Calculate the values of *m*.

(a) 6 × 3 = *m*
(b) 8 × *m* = 72
(c) *m* × 20 = 4 980
(d) 10 ÷ 5 = *m*
(e) 900 ÷ *m* = 15
(f) *m* ÷ 6 = 80 014

16 Calculate.

(a) 70 + 13 × 4 = ☐
(b) 64 – 3 × 5 = ☐
(c) 590 + 402 ÷ 6 = ☐
(d) 8 900 – 1 604 ÷ 4 = ☐
(e) (359 – 128) × 9 = ☐
(f) (80 + 754) × 26 = ☐
(g) (405 + 29) × (50 + 23) = ☐
(h) (6 365 – 4 030) × (25 – 17) = ☐
(i) (320 + 480) ÷ (12 + 8) = ☐
(j) (80 175 – 29 310) ÷ (100 – 85) = ☐

17 Solve the following problems.

(a) Harjeevan Singh solved the problem below correctly.

Properties of a 6-digit number:
- value less than 600 000
- digit 8 in the hundreds place
- has digit values of 1 and 20
- becomes 600 000 when rounded off to the nearest thousand and ten thousand

What is his answer?

TEACHER'S NOTES
1.6.1, 1.6.2, 1.6.4, 1.7.1, 1.8.1, 1.8.2, 1.9.1

(b) The table shows the number of pilgrims who performed *umrah* in 2019.

Country	Malaysia	Egypt	Turkey	Pakistan	Indonesia
Number of pilgrims	176 661	165 553	131 812	819 119	534 137

Source: https://rb.gy/tqb0vg

(i) State the country with the highest number of pilgrims.

(ii) Find the total number of pilgrims from Malaysia, Egypt and Turkey.

(iii) How many more is the number of pilgrims from Pakistan compared to Indonesia?

(c) A factory produces 132 780 fishballs per day.

(i) How many fishballs can be produced in 4 days?

(ii) The fishballs produced in one day are packed in equal amounts. Each packet has 20 fishballs. How many packets are produced altogether?

(d) Merias Cake Shop sells 45 cakes per day. In y days, 540 cakes are sold. What is the value of y?

(e) Puan Sherry divides 42 curry puffs into m packets to be frozen. Each packet is filled with 7 pieces of curry puffs. What is the value of m?

(f) There are 15 packets of vegetable seeds. 5 packages of seeds have just been received. Each package has 30 packets of seeds. Write a number sentence to find the latest total number of packets of seeds. Then, solve it.

(g) A nursery delivered 3 lorries of flower pots to a resort. Each lorry transported 45 flower pots. During the journey, 8 pots cracked. How many pots did not crack?

(h) Encik Suki and his wife each withdraw RM1 800 and RM1 200 respectively. They divide the total amount equally for school expenses of their 4 children. Calculate the school expenses of one child.

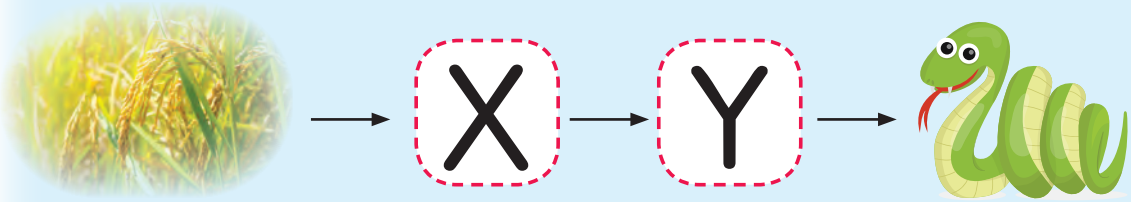
FUN TIME

Tools/Materials questions, blank papers, pens

Participants 4 pupils in a group

Task

1. Scan the QR code to obtain the questions.
2. Answer all the questions. Match the answers to the letters given below.
3. Then, write down letters according to the question numbers in X and Y to complete the given food chain.



X					
	3	6	4	2	5	1
Y					
	9	7	10	8	

41 428	c	RM32 000	p	771 222	f
30 000	i	92	r	690 222	d
680 000	t	32 553	s	158 062	o
7 600	g	2 910	a	RM 15 640	n
43	e	760	u	29	k
RM3 200	b	771 232	m	300 000	h

SCAN THIS

TEACHER'S NOTES

1.2.1, 1.4.1, 1.5.2, 1.6.2, 1.7.1, 1.8.1, 1.8.2, 1.9.2

- Scan the QR code to obtain the questions to be answered.
- Vary questions to make a new food chain.

2 FRACTIONS, DECIMALS, AND PERCENTAGES

MULTIPLICATION OF FRACTIONS

1

MARBLE CAKE RECIPE

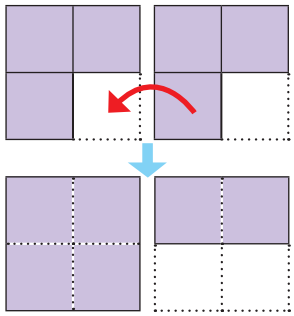
- I cup of butter
- I tablespoon of baking powder
- 3 eggs
- I teaspoon of vanilla essence
- $\frac{3}{4}$ cup of castor sugar
- 2 tablespoons of cocoa powder
- $1\frac{1}{2}$ cups of wheat flour
- 3 tablespoons of sweetened condensed milk

How many cups of castor sugar are needed to make 2 batches of cake batter?

$2 \times \frac{3}{4}$ cup = ☐ cups

Method 1

$2 \times \frac{3}{4}$



$1\frac{1}{2}$

$$2 \times \frac{3}{4} = \frac{2}{1} \times \frac{3}{4}$$
$$= \frac{6 \div 2}{4 \div 2}$$
$$= \frac{3}{2}$$
$$= 1\frac{1}{2}$$

Convert whole number to improper fraction.

Multiply numerator with numerator. Multiply denominator with denominator.

Simplify fraction.

Convert improper fraction to mixed numbers.

Method 2

$$2 \times \frac{3}{4} = \frac{\overset{1}{\cancel{2}}}{1} \times \frac{3}{\underset{2}{\cancel{4}}}$$

do cancellation

$$= \frac{3}{2}$$
$$= 1\frac{1}{2}$$

$2 \times \frac{3}{4}$ cup = $1\frac{1}{2}$ cups

$1\frac{1}{2}$ cups of castor sugar are needed to make 2 batches of cake batter.

2.1.1

- Show the steps on how to multiply whole numbers with fractions.
- Use shaded diagram to reinforce the multiplication concept. Recall the conversion of improper fractions to mixed numbers.

2 My mass is $3\frac{1}{2}$ times yours.

Is $26 \times 3\frac{1}{2}$ kg = 91 kg? Discuss.

Calculate dad's mass.

$3\frac{1}{2} \times 26$ kg = ☐ kg

Method 1

$3\frac{1}{2} \times 26 = \frac{7}{\cancel{2}_{1}} \times \frac{\cancel{26}^{13}}{1}$

$= 91$

Method 2

26 kg	26 kg	26 kg	13 kg	13 kg

$3\frac{1}{2} \times 26 = (3 \times 26) + (\frac{1}{\cancel{2}_{1}} \times \cancel{26}^{13})$

$= 78 + 13$

$= 91$

$3\frac{1}{2} \times 26$ kg = **91** kg

Dad's mass is **91** kg.

3 $16 \times 5\frac{9}{10}$ = ☐

$16 \times 5\frac{9}{10} = \frac{\cancel{16}^{8}}{1} \times \frac{59}{\cancel{10}_{5}}$

$= \frac{472}{5}$

$= 94\frac{2}{5}$

$$\begin{array}{r} 094 \\ 5\overline{)472} \\ -0\downarrow \\ \hline 47 \\ -45\downarrow \\ \hline 22 \\ -20 \\ \hline 2 \end{array}$$

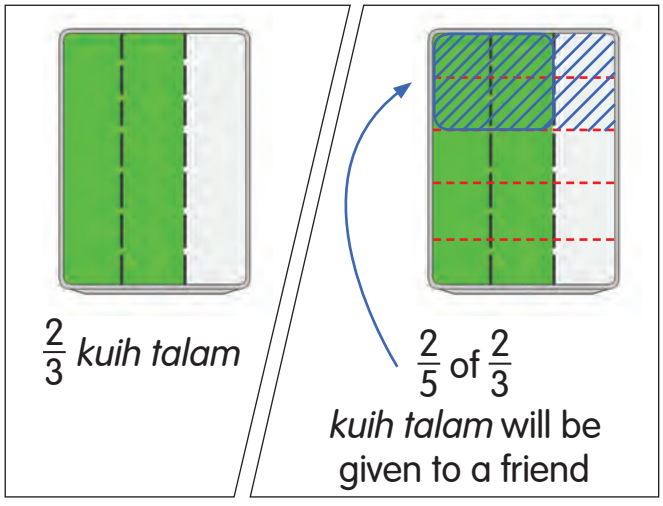
$16 \times 5\frac{9}{10}$ = **$94\frac{2}{5}$**

TEACHER'S NOTES

2.1.1

- Recall the methods to determine whole numbers, denominators, and numerators when dividing to convert improper fractions to mixed numbers.

4



How many parts of *kuih talam* will be given to a friend?

$\frac{2}{5} \times \frac{2}{3} = \square$

$\frac{2}{5} \times \frac{2}{3} = \frac{2 \times 2}{5 \times 3}$

$= \frac{4}{15}$

$\frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$

$\frac{4}{15}$ parts of *kuih talam* will be given to a friend.

SMART TRAIL

FOLD AND OBTAIN

Tools/Materials questions, A4 papers, pencils, rulers, coloured pencils

Task

question $\frac{1}{2} \times \frac{3}{4} = \square$

1. Take a piece of A4 paper.
2. Fold the paper horizontally into 4 equal parts.
3. Mark the folded lines with pencil. Shade three parts of the paper to represent $\frac{3}{4}$.
4. Fold the paper again vertically into 2 equal parts. Mark the folded line with pencil. Shade one part to represent $\frac{1}{2}$.
5. Colour the overlapped shaded parts.
6. Jot down the answer for the question.
7. Repeat step 1 until step 6 for the following questions:
   (a) $\frac{1}{3} \times \frac{2}{3} = \square$ (b) $\frac{3}{4} \times \frac{1}{8} = \square$ (c) $\frac{2}{5} \times \frac{1}{4} = \square$
8. Display your work at the mathematics corner.

SCAN THIS

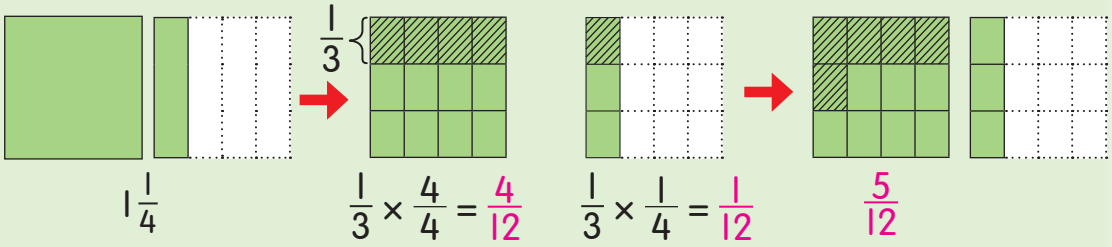
TEACHER'S NOTES 2.1.1

- Provide examples of multiplication of two fractions with the same denominators. For examples, $\frac{3}{5} \times \frac{1}{5} = \square$ and $\frac{1}{6} \times 1\frac{1}{6} = \square$.

5 Multiply $\frac{1}{3}$ by $1\frac{1}{4}$.

$\frac{1}{3} \times 1\frac{1}{4} =$ ☐

Method 1



Method 2

$\frac{1}{3} \times 1\frac{1}{4} = \frac{1}{3} \times \frac{5}{4}$

$= \frac{5}{12}$

$\frac{1}{3} \times 1\frac{1}{4} = \mathbf{\frac{5}{12}}$

6 Find the product of $3\frac{7}{8}$ and $\frac{4}{q}$.

$3\frac{7}{8} \times \frac{4}{q} =$ ☐

$3\frac{7}{8} \times \frac{4}{q} = \frac{31}{\cancel{8}_{2}} \times \frac{\cancel{4}^{1}}{q}$

$= \frac{31}{2} \times \frac{1}{q}$

$= \frac{31}{18}$

$= 1\frac{13}{18}$

$$\begin{array}{r} 01 \\ 18\overline{)\,31} \\ -\,0 \\ \hline 31 \\ -\,18 \\ \hline 13 \end{array}$$

$3\frac{7}{8} \times \frac{4}{q} = \mathbf{1\frac{13}{18}}$

7 $1\frac{5}{6} \times 3\frac{6}{7} =$ ☐

$1\frac{5}{6} \times 3\frac{6}{7} = \frac{11}{6} \times \frac{27}{7}$

$= \frac{297}{42}$

$= 7\frac{3 \div 3}{42 \div 3}$

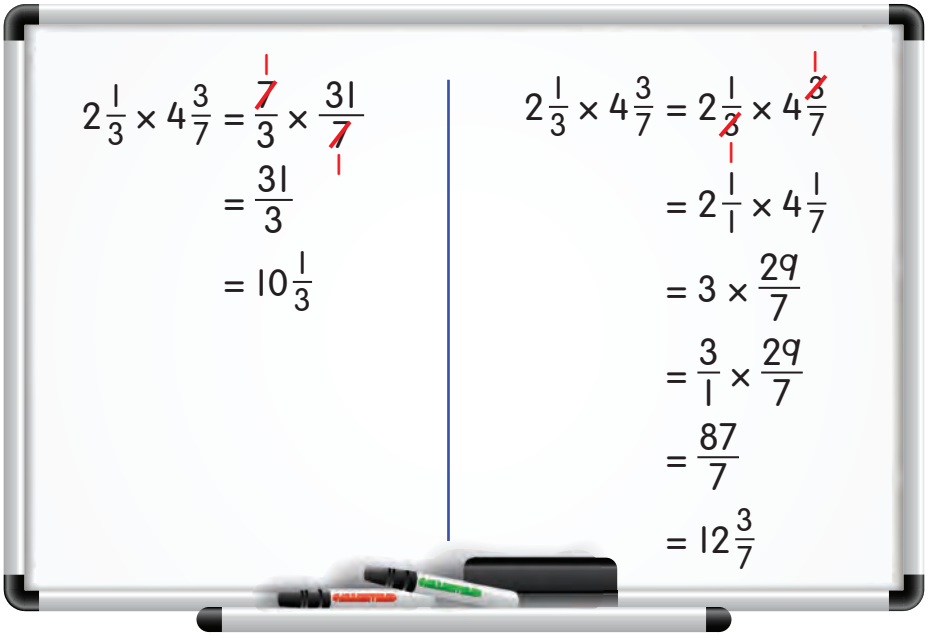
$= 7\frac{1}{14}$

$1\frac{5}{6} \times 3\frac{6}{7} = \mathbf{7\frac{1}{14}}$

TEACHER'S NOTES

2.1.1 • Emphasise that the final answer must be stated in the simplest form.

8 $2\frac{1}{3} \times 4\frac{3}{7} =$ ☐



$$2\frac{1}{3} \times 4\frac{3}{7} = \frac{7}{3} \times \frac{31}{7}$$
$$= \frac{31}{3}$$
$$= 10\frac{1}{3}$$

$$2\frac{1}{3} \times 4\frac{3}{7} = 2\frac{1}{3} \times 4\frac{3}{7}$$
$$= 2\frac{1}{1} \times 4\frac{1}{7}$$
$$= 3 \times \frac{29}{7}$$
$$= \frac{3}{1} \times \frac{29}{7}$$
$$= \frac{87}{7}$$
$$= 12\frac{3}{7}$$

Which answer is correct? Discuss.

SCAN THIS

TRY THESE

1 Draw and shade the following diagrams to get the answers.

(a) $\frac{2}{3} \times \frac{1}{4} =$ ☐

(b) $1\frac{3}{4} \times \frac{1}{2} =$ ☐

2 Solve these.

(a) $8 \times \frac{2}{3} =$ ☐

(b) $\frac{2}{9} \times 45 =$ ☐

(c) $3\frac{1}{5} \times 25 =$ ☐

(d) $63 \times 6\frac{2}{7} =$ ☐

(e) $\frac{1}{4} \times \frac{3}{4} =$ ☐

(f) $\frac{4}{5} \times \frac{5}{8} =$ ☐

(g) $\frac{8}{9} \times \frac{1}{4} =$ ☐

(h) $\frac{1}{6} \times 12\frac{5}{6} =$ ☐

(i) $\frac{5}{6} \times 1\frac{1}{3} =$ ☐

(j) $2\frac{1}{2} \times \frac{6}{7} =$ ☐

(k) $1\frac{3}{8} \times 2\frac{7}{8} =$ ☐

(l) $4\frac{3}{7} \times 1\frac{7}{10} =$ ☐

TEACHER'S NOTES

2.1.1

- Vary the questions to ensure pupils' understanding on how to apply the cancellation method correctly.
- Ask pupils to scan the QR Code to check the answers.

ROUNDING OFF DECIMALS

1

SHOT-PUT EVENT

Athlete's name: Asmat

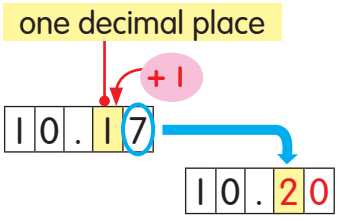
Record	Distance
current	10.17 m
previous	9.85 m

a Round off 10.17 m to one decimal place.

Method 1

10.17 is between 10.10 and 10.20.
10.17 is nearer to 10.20 compared to 10.10.
10.17 becomes 10.2 when rounded off to one decimal place.

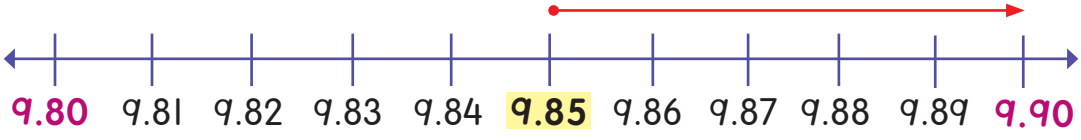
Method 2



Identify the digit at one decimal place, which is 1. → Look to the digit on the right of 1. If it is 5 to 9, add 1 to digit 1. → The digit next to 2 becomes 0. → Ignore 0.

10.17 m becomes **10.2** m when rounded off to one decimal place.

b Round off 9.85 m to one decimal place.

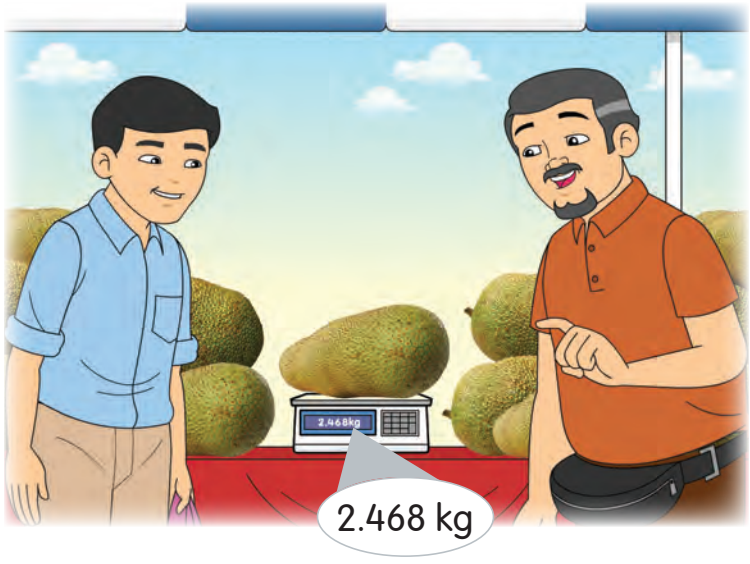


9.85 m becomes ____ m when rounded off to one decimal place.

TEACHER'S NOTES 2.2.1

- Emphasise that the method of rounding off decimals and whole numbers is similar.

2



Based on the picture above, state the mass of the *cempedak* when rounded off to two decimal places.

two decimal places

+ 1

2 . 4 6 8

2 . 4 7 0

Identify the digit at two decimal places, which is 6.

Look to the digit on the right of 6. If it is 5 to 9, add 1 to digit 6.

The digit next to 7 becomes 0.

Ignore 0.

2.468 kg becomes **2.47** kg when rounded off to two decimal places.

The mass of the *cempedak* when rounded off to two decimal places is ____.

3 Round off 740.5692 to three decimal places.

three decimal places

7 4 0 . 5 6 9 2

7 4 0 . 5 6 9 0

Identify the digit at three decimal places, which is 9.

Look to the digit on the right of 9. If it is 0 to 4, the digit 9 remains.

The digit next to 9 becomes 0.

Ignore 0.

740.5692 becomes **740.569** when rounded off to three decimal places.

Round off 740.5692 to one and two decimal places.

2.2.1

- Ask each pupil to write one decimal number with four decimal places and round it off to one, two, and three decimal places.

BRAIN TEASER

ones	tenths	hundredths	thousandths
8 •	*a*	*b*	*c*

Find the digits of ***a***, ***b***, and ***c*** so that the decimal number becomes 8.5 when rounded off to one decimal place.

TRY THESE

1 Round off the decimal numbers to one decimal place.

(a) 0.53 (b) 29.615 (c) 70.0731

2 Round off the decimal numbers to the underlined decimal place.

(a) 8.013 (b) 54.639 (c) 62.9451

(d) 94.4726 (e) 71.0990 (f) 250.6983

SMART TRAIL

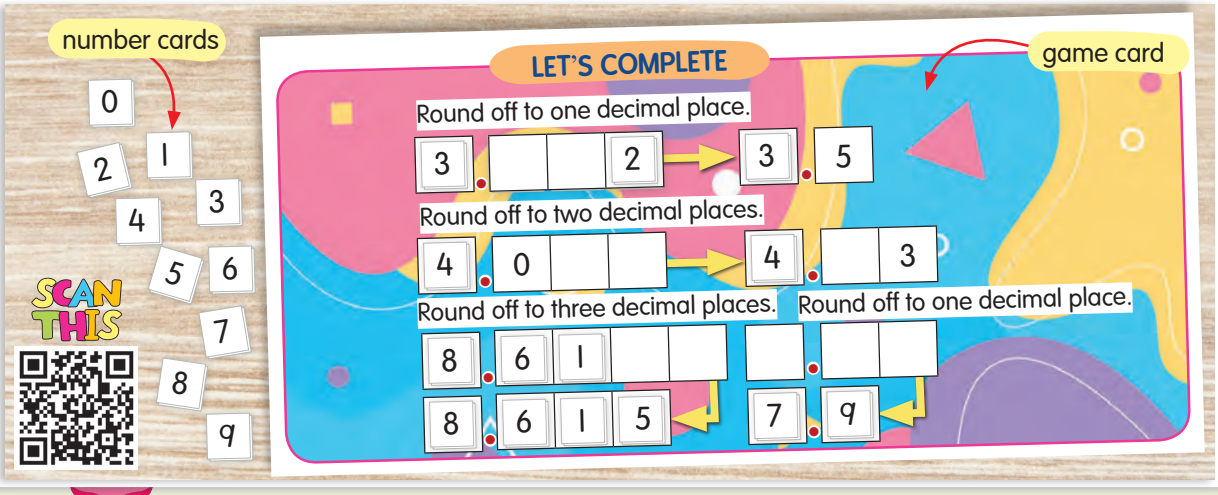
PASTE AND WIN

Tools/Materials game cards, number cards 0 to 9, glue

Participants 3 pupils in a group and a referee

How to play

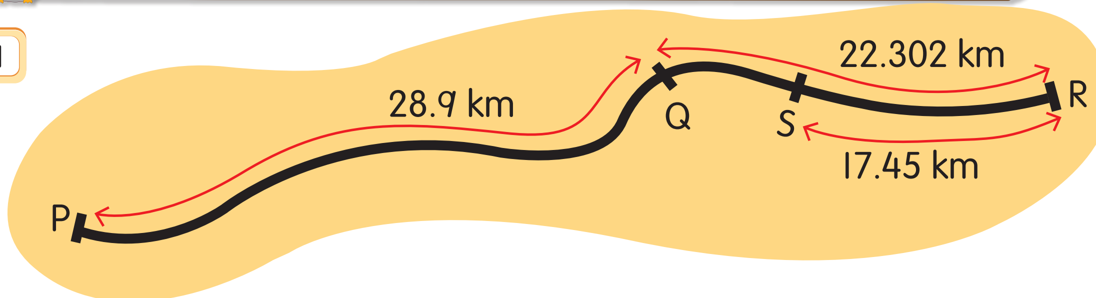
1 Each group receives a game card, number cards 0 to 9, and glue.
2 Each group is required to complete the game card by pasting the number cards.
3 The group with the fastest and accurate answers wins.



2.2.1 • Carry out rounding off activities at https://rb.gy/jbjtl1

ADDITION AND SUBTRACTION OF DECIMALS

1



Based on the diagram above, calculate the distance from P to S.

28.9 km + 22.302 km – 17.45 km = ☐ km

Step 1

```
   1 1
   2 8 . 9 0 0
 + 2 2 . 3 0 2
   5 1 . 2 0 2
```

Align the decimal points.

Step 2

```
  10  11
  4 0  1 10
  5 1 . 2 0 2
– 1 7 . 4 5 0
  3 3 . 7 5 2
```

Solve addition before doing subtraction.

28.9 km + 22.302 km – 17.45 km = **33.752** km

The distance from P to S is **33.752** km.

2 74.285 + 9.607 – 18.043 = ☐

Method 1

```
   1       1
   7 4 . 2 8 5
 +   9 . 6 0 7
   8 3 . 8 9 2
```

```
   7 13    8 12
   8 3 . 8 9 2
 – 1 8 . 0 4 3
   6 5 . 8 4 9
```

Method 2

```
   6 14
   7 4 . 2 8 5
 – 1 8 . 0 4 3
   5 6 . 2 4 2
```

```
   1
   5 6 . 2 4 2
 +   9 . 6 0 7
   6 5 . 8 4 9
```

Are both calculations correct? Discuss.

74.285 + 9.607 – 18.043 = **65.849**

TEACHER'S NOTES

2.2.2
- Relate mixed operations involving addition and subtraction of decimals to daily life situations such as sports event scores, daily allowances, and expenses.
- Carry out group activities and ask pupils to present their calculations.

3 80 − 63.819 + 4.57 = ☐

```
  9  9 9
 7 Ø  ØØ10
 8 Ø . Ø Ø Ø
−6 3 . 8 1 9
  1 6 . 1 8 1
```

write 0 after decimal point

```
    1   1
  1 6 . 1 8 1
+   4 . 5 7 0
  2 0 . 7 5 1
```

80 − 63.819 + 4.57 = **20.751**

4 2.86 − 1.874 + 0.279 = ☐

Pupil A's calculation

```
    17 15
  1  7 Ø 10
  2 . Ø Ø Ø
− 1 . 8 7 4
  0 . 9 8 6

    1   1 1
  0 . 9 8 6
+ 0 . 2 7 9
  1 . 2 6 5
```

Which calculation is correct? Discuss.

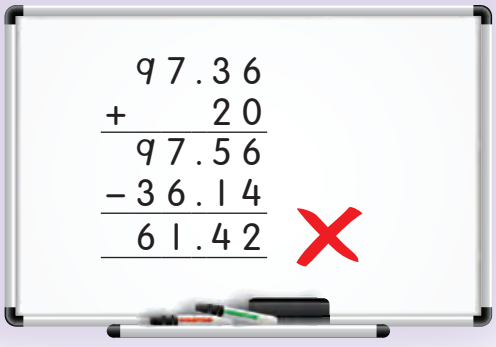
Pupil B's calculation

```
    1   1 1
  1 . 8 7 4
+ 0 . 2 7 9
  2 . 1 5 3

      5 10
  2 . 8 Ø Ø
− 2 . 1 5 3
  0 . 7 0 7
```

5 97.36 + 20 − 36.14 = ☐

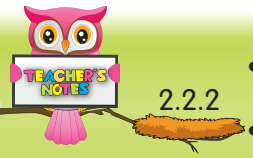
```
  9 7 . 3 6
+       2 0
  9 7 . 5 6
− 3 6 . 1 4
  6 1 . 4 2
```



The answer above is incorrect. Explain.

62.17	=	59.2	
+	−	43	45.97

Arrange the number cards and symbol cards above to create a correct number sentence.



2.2.2

- Guide pupils in solving number sentences using different methods of calculation.
- Analyse pupils' errors to enhance their understanding.

6 90.09 + 76.185 − ☐ = 63.575

Step 1

$$\begin{array}{r} {\scriptstyle 1} \\ 90.090 \\ +\ 76.185 \\ \hline 166.275 \end{array}$$

Step 2

Simple example.

8 − 2 = 6

8 − 6 = 2

$$\begin{array}{r} {\scriptstyle 5\ \ 12} \\ 166.275 \\ -\ 63.575 \\ \hline 102.700 \end{array}$$

90.09 + 76.185 − **102.7** = 63.575

SMART TRAIL — MY CALCULATOR

Tools/Materials MS Excel software

Task

1. Scan the QR Code. Download the steps to create "My Calculator".
2. Launch MS Excel. Follow the steps and create the calculator with peers.
3. Use the calculator to solve the following questions.

SCAN THIS

(a) 99.02 − 26.41 + 3.89 = ☐ (b) 9.35 + 47 − 2.017 = ☐

TRY THESE

1 Solve these.

(a)
$$\begin{array}{r} 8.4 \\ +\ 5.4 \\ \hline \square \end{array} \rightarrow \begin{array}{r} \square \\ -\ 9.3 \\ \hline \square \end{array}$$

(b)
$$\begin{array}{r} 79.6 \\ -\ 52.8 \\ \hline \square \end{array} \rightarrow \begin{array}{r} \square \\ +\ 104.6 \\ \hline \square \end{array}$$

2 Calculate.

(a) 79.6 + 52.8 − 104.6 = ☐ (b) 62.79 + 8.92 − 71.01 = ☐

(c) 152.843 − 100.652 + 37.452 = ☐ (d) 841.306 − 427.8 + 250.71 = ☐

(e) 0.03 − 0.015 + 90 = ☐ (f) 76.091 + 81 − 5.9 = ☐

3 Complete these.

(a) 61.02 + 38.944 − ☐ = 30.072 (b) ☐ − 56.72 + 31.601 = 112.36

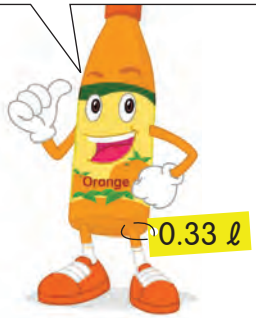
TEACHER'S NOTES 2.2.2

- Guide pupils to carry out the "Smart Trail" activity and encourage them to create their own questions.
- Carry out 21st Century Learning activities such as Bus Stop or Gallery Walk in solving "Try These" questions.

MULTIPLICATION OF DECIMALS

1

The volume of orange concentrate in litres is 0.33 ℓ.



What is the total volume of orange concentrate in 10 similar bottles?

10 × 0.33 ℓ = ☐ ℓ

$$\begin{array}{r} 0.33 \\ \times\ \ 10 \\ \hline 3.30 \end{array}$$

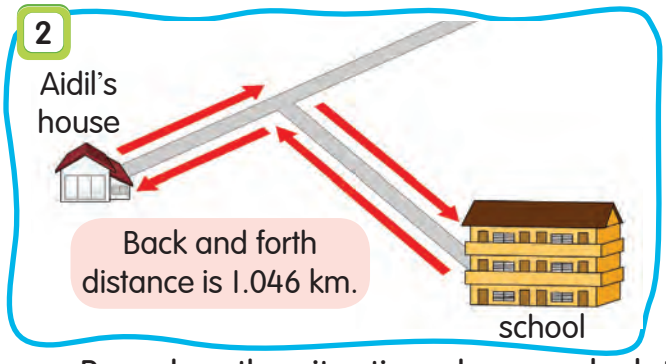
0.33 has 2 decimal places; 3.30 has 2 decimal places

10 × 0.33 ℓ = **3.3** ℓ

The total volume of orange concentrate in 10 similar bottles is **3.3** ℓ.

3.30 ℓ can be written as 3.3 ℓ.

2



I cycle back and forth from home to school for 24 times, in a month.

Based on the situation above, calculate the total distance travelled by Aidil in a month.

24 × 1.046 km = ☐

$$\begin{array}{r} {\scriptstyle 1\ \ \ } \\ {\scriptstyle 1\ 2\ } \\ 1.046 \\ \times\ \ \ 24 \\ \hline {\scriptstyle 1\ \ 1\ \ } \\ 4184 \\ +\ 20920 \\ \hline 25.104 \end{array}$$

1.046 has 3 decimal places; 25.104 has 3 decimal places

Use the lattice method to check the answer.

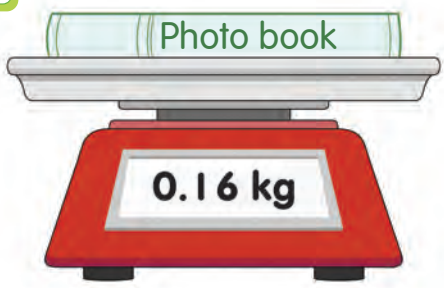
24 × 1.046 km = **25.104** km

The total distance travelled by Aidil in a month is **25.104** km.

TEACHER'S NOTES

- State that multiplying decimals is similar to multiplying whole numbers.
- Emphasise that the number of decimal places in the answer must be the same as in the question.

3



Calculate the total mass of 100 similar photo books based on the picture given.

100 × 0.16 kg = ☐ kg

100 × 0.16 = 16.0

100 × 0.16 kg = **16** kg

The total mass of 100 similar photo books is **16** kg.

4 Calculate 1 000 multiplied by 6.045.

1 000 × 6.045 = ☐

1 000 × 6 . 0 4 5 = 6 045.0

1 000 × 6.045 = **6 045**

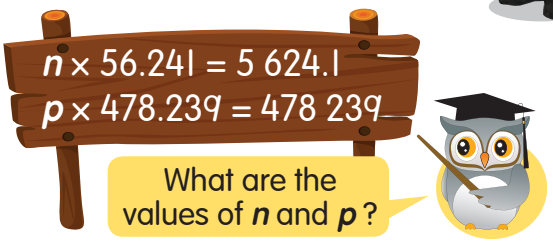
To MULTIPLY, shift the decimal point to the RIGHT.

× 10 one decimal place
× 100 two decimal places
× 1 000 three decimal places

5 ***m*** × 9.873 = 987.3

1 × 9.873 = 9.873
10 × 9.873 = 98.73
100 × 9.873 = 987.3
1 000 × 9.873 = 9 873.0

100 × 9.873 = 987.3



1 Multiply.

(a) 4 × 5.6 = ☐ (b) 57 × 94.1 = ☐ (c) 8 × 12.65 = ☐

(d) 64 × 982.03 = ☐ (e) 31 × 98.276 = ☐ (f) 87 × 103.064 = ☐

(g) 10 × 2.95 = ☐ (h) 100 × 92.851 = ☐ (i) 1 000 × 204.643 = ☐

2 What are the values of ***q***?

(a) ***q*** × 74.376 = 743.76 (b) ***q*** × 836.092 = 836 092

2.2.3

- Conduct the activity by showing simple examples of multiplication of decimals involving one decimal place.
- Encourage pupils to vary the calculation methods to multiply.

DIVISION OF DECIMALS

1 What is the mass of 1 small packet of biscuits?

0.6 kg ÷ 12 = ☐ kg

$$\begin{array}{r} 0.05 \\ 12\overline{)\,0.60} \\ -0 \\ \hline 06 \\ -0 \\ \hline 60 \\ -60 \\ \hline 0 \end{array}$$

write 0

12 times table

12	24	36
48	60	72
84	96	108

0.6 kg ÷ 12 = **0.05** kg

The mass of 1 small packet of biscuits is **0.05** kg.

2 Find the volume of watermelon juice in each cup sold.

22.5 ℓ ÷ 60 = ☐ ℓ

$$\begin{array}{r} 00.375 \\ 60\overline{)\,22.500} \\ -0 \\ \hline 22 \\ -0 \\ \hline 225 \\ -180 \\ \hline 450 \\ -420 \\ \hline 300 \\ -300 \\ \hline 0 \end{array}$$

60 times table

× 1	60
× 2	120
× 3	180
× 4	240
× 5	300
× 6	360
× 7	420
× 8	480
× 9	540

22.5 ℓ ÷ 60 = **0.375** ℓ

The volume of watermelon juice in each cup sold is **0.375** ℓ.

TEACHER'S NOTES

- Conduct the activity by showing simple examples of division involving decimals with a single digit.
- Guide pupils to use times table if necessary.
- Encourage pupils to check their answers using multiplication.

3 Lucy, please cut this lace into 10 parts of equal length.

What is the length of each part of the lace?

9.25 m ÷ 10 = ☐ m

Method 1

$$\begin{array}{r} 0.925 \\ 10\overline{)\,9.250} \\ -0 \\ \hline 92 \\ -90 \\ \hline 25 \\ -20 \\ \hline 50 \\ -50 \\ \hline 0 \end{array}$$

Method 2

9.25 ÷ 10
= 0.925

9.25 m ÷ 10 = **0.925** m

The length of each part of the lace is **0.925** m.

4 54.9 ÷ 100 = ☐

54.9 ÷ 100 = 0.549

54.9 ÷ 100 = **0.549**

To DIVIDE, shift the decimal point to the LEFT.

÷ 10	one decimal place
÷ 100	two decimal places
÷ 1 000	three decimal places

5 8 973 ÷ p = 8.973

8 973 ÷ 1 = 8 973
8 973 ÷ 10 = 897.3
8 973 ÷ 100 = 89.73
8 973 ÷ 1 000 = 8.973

8 973 ÷ **1 000** = 8.973

TRY THESE

1 Divide.

(a) 54.965 ÷ 5 = ☐
(b) 937.5 ÷ 15 = ☐
(c) 85.015 ÷ 49 = ☐
(d) 102.56 ÷ 10 = ☐
(e) 6.98 ÷ 10 = ☐
(f) 501.2 ÷ 100 = ☐
(g) 137 ÷ 100 = ☐
(h) 46 ÷ 1 000 = ☐
(i) 9 ÷ 1 000 = ☐

2 What are the values of h?

(a) 30.2 ÷ h = 3.02
(b) 704 ÷ h = 0.704

TEACHER'S NOTES

2.2.4

- Provide more exercises regarding division of decimals involving 10, 100 and 1 000 by shifting the decimal point.

CONVERT MIXED NUMBERS AND PERCENTAGES

1

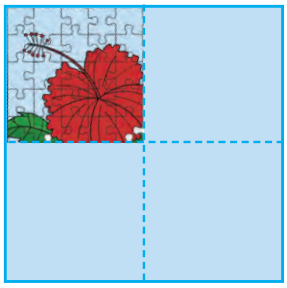
One picture is completed.

Another picture is only a quarter completed.

State the fraction of the completed jigsaw puzzle in percentage.

$1\frac{1}{4}$ = ☐ %

$1 = \frac{100}{100} = 100\%$



$\frac{1 \times 25}{4 \times 25} = \frac{25}{100}$

$= 25\%$

$1\frac{1}{4}$ = **125** %

125% of jigsaw puzzle is completed.

2 Convert $2\frac{3}{10}$ to percentage.

$2\frac{3}{10}$ = ☐ %

Method 1 $2\frac{3}{10} = \frac{2}{1} + \frac{3}{10}$

convert to fraction of hundredths

$= \frac{2 \times 100}{1 \times 100} + \frac{3 \times 10}{10 \times 10}$

$= \frac{200}{100} + \frac{30}{100}$

$= 200\% + 30\%$

$=$ ☐

Method 2

$2\frac{3}{10} = 2 + \frac{3}{10}$

$= 2 + 0.3$ convert to decimal

$= 2.3$

$2.3 \times 100\% =$ ☐ multiply the decimal by 100%

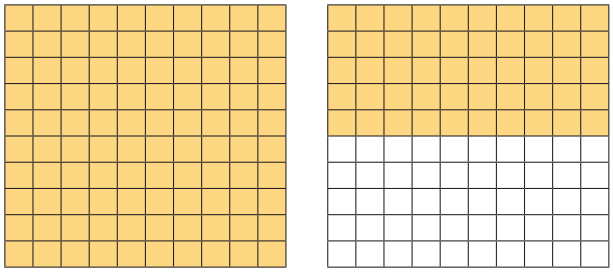
TEACHER'S NOTES 2.3.1

- Use the 100-squared grid to enhance pupils' understanding regarding fractions of hundredths.

3 State 150% in mixed numbers.

150% = ☐

Method 1



$100\% = \frac{100}{100} = 1$ $\quad 50\% = \frac{50}{100} = \frac{1}{2}$

$150\% = 1\frac{1}{2}$

150% in mixed numbers is $1\frac{1}{2}$.

Method 2

$$150\% = 100\% + 50\%$$
$$= \frac{100}{100} + \frac{50}{100}$$
$$= 1 + \frac{5 \div 5}{10 \div 5}$$
$$= 1 + \frac{1}{2}$$
$$= 1\frac{1}{2}$$

4 Convert 208% to mixed numbers.

$$208\% = \frac{208}{100}$$
$$= \frac{200 + 8}{100}$$
$$= \frac{200}{100} + \frac{8 \div ☐}{100 \div ☐}$$
$$= ☐ + \frac{☐}{☐}$$
$$= ☐$$

Try to divide 208 by 100 and simplify the answer.

TRY THESE

Complete these.

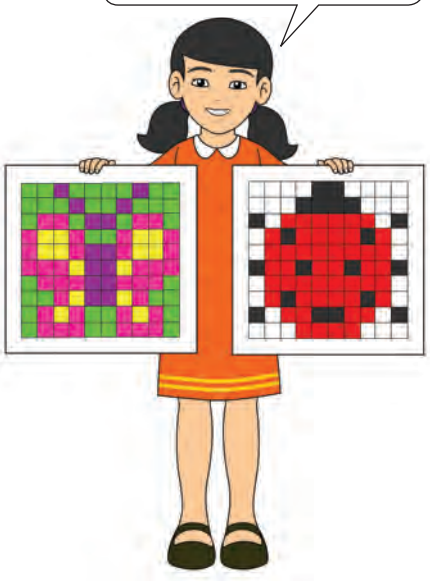
Mixed numbers	Percentages
$1\frac{9}{10}$	
	180%
$6\frac{3}{4}$	
	304%
$5\frac{2}{5}$	
	205%

2.3.1

- Train pupils to remember the factors of fractions of hundredths which are, 5 and 20, 4 and 25, 2 and 50 as well as 10 and 10.
- Carry out a quiz on converting fractions of hundredths to mixed numbers spontaneously.

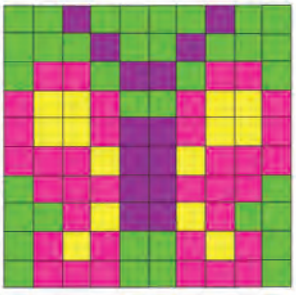
WHAT IS THE QUANTITY? WHAT IS THE PERCENTAGE?

1 I created the butterfly and ladybug patterns.

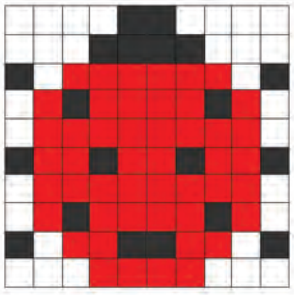


168% is coloured. State the total number of coloured squares.

Method 1



100% × 100 squares
= 100 squares



68% × 100 squares
= 68 squares

168 squares

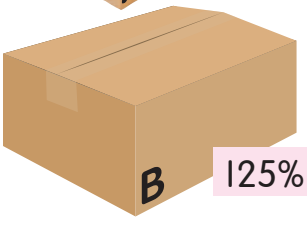
Method 2

$$168\% \times 100 \text{ squares} = \frac{168}{\cancel{100}} \times \cancel{100} \text{ squares}$$
$$= 168 \text{ squares}$$

The total number of coloured squares is **168**.

2 Box B contains 125% mineral water bottles of Box A. How many mineral water bottles are there in Box B?

100% → 24 bottles



125% → ? bottles

125% of 24 bottles

$$= \frac{125}{100} \times 24 \text{ bottles}$$

$$= \left(\frac{\cancel{100}^{1}}{\cancel{100}_{1}} \times 24 \text{ bottles}\right) + \left(\frac{\cancel{25}^{1}}{\cancel{100}_{4}} \times \cancel{24}^{6} \text{ bottles}\right)$$

$$= 24 \text{ bottles} + 6 \text{ bottles}$$
$$= 30 \text{ bottles}$$

There are **30 bottles** of mineral water in Box B.

TEACHER'S NOTES 2.3.2

- Carry out colouring 100 squares activity to find the percentage of a quantity.
- Guide pupils to apply percentages from the easy to difficult ones.

3

My Goal is to Save More!
March Savings

Goal	RM70
Savings	RM140

What is the percentage of savings compared to the goal?

$$\text{Fraction} = \frac{\text{savings}}{\text{goal}} = \frac{\text{RM140}}{\text{RM70}}$$

Percentage

$$\frac{\cancel{\text{RM140}}^{2}}{\cancel{\text{RM70}}_{1}} \times 100\% = \frac{2}{1} \times 100\%$$
$$= 200\%$$

The percentage of savings compared to the goal is **200%**.

TIPS

Quantity unit must be the same.
↓
Write the quantity in fraction.
↓
Multiply the fraction by 100%.

4 The initial production of face mask is 80 boxes. If the order is 180 boxes, calculate the percentage of the orders compared to the initial production.

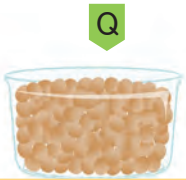
$$\frac{180}{80} \times 100\% = \frac{\cancel{1\,800}^{225}}{\cancel{8}_{1}} \%$$
$$= 225\%$$

The percentage of orders compared to the initial production is **225%**.

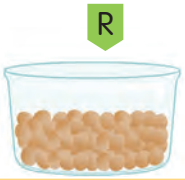
TRY THESE

1 Calculate the number of eggs in:
- (a) container Q.
- (b) container R.

30 eggs



Container Q contains 260% eggs of container P.



Container R contains 130% eggs of container P.

2 Find the percentages.
- (a) 42 books published over the target of 30 books.
- (b) 108 packagings completed over the targetted 90 packagings.

TEACHER'S NOTES

2.3.2

- Ask pupils to revise calculations involving percentages that are less than 100% first.
- Simplify the calculation for values that are more than 100 using the partitioning method.

SOLVE THE PROBLEMS

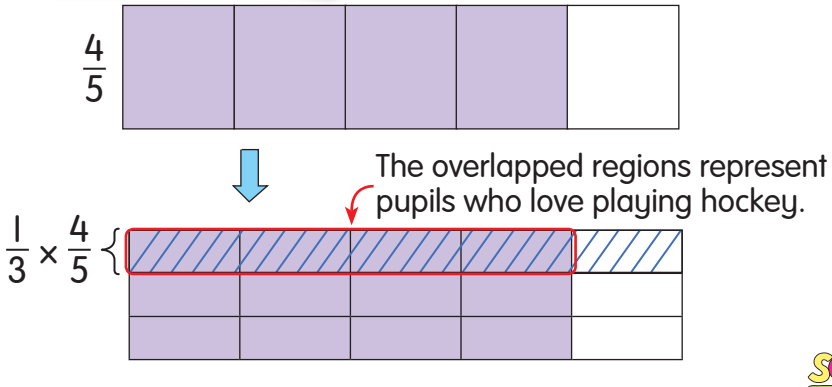
1 In a survey, $\frac{4}{5}$ of Year 5 Dedikasi pupils love playing football. $\frac{1}{3}$ of this group of pupils also love playing hockey. State the fraction of pupils who love playing hockey.

Name	Football	Hockey
Qalish	/	/
Kevin	/	
Jagdeep	/	/
Fahim		/
Tan	/	/
Rafiq	/	

Understand the problem

- $\frac{4}{5}$ of Year 5 Dedikasi pupils love playing football.
- $\frac{1}{3}$ of the pupils who love playing football also love playing hockey.
- Find the fraction of pupils who love playing hockey.

Plan the strategy



Solve

$\frac{1}{3} \times \frac{4}{5} = \square$

$\frac{1}{3} \times \frac{4}{5} = \frac{1 \times 4}{3 \times 5}$

$= \frac{4}{15}$

Check

Carry out a paper folding activity.

SCAN THIS

$\frac{1}{3} \times \frac{4}{5} = \frac{4}{15}$

The fraction of pupils who love playing hockey is $\frac{4}{15}$.

TEACHER'S NOTES 2.4.1

- Guide pupils to understand the question and draw a diagram to represent the problem.
- Train pupils to write a number sentence according to the question cards given.

2 The mass of a laptop is 1.26 kg. Box A as shown on the right can support a maximum mass of 14 kg. Can the box accommodate the total mass of 12 similar laptops?

Understand the problem

- A laptop has a mass of 1.26 kg.
- Box A can support 14 kg.
- Can box A accommodate the total mass of 12 similar laptops?

Plan the strategy

the mass of 1 laptop 1.26 kg → the mass of 12 similar laptops 12 × 1.26 kg = ? → Does the total mass of 12 similar laptops exceed 14 kg?

Solve

12 × 1.26 kg = ☐ kg

$$\begin{array}{r} 1.26 \text{ kg} \\ \times \quad 12 \\ \hline 252 \\ +1260 \\ \hline 15.12 \text{ kg} \end{array}$$

12 × 1.26 kg = **15.12** kg

Check

$$\begin{array}{r} 1.26 \text{ kg} \\ 12\overline{)\,15.12 \text{ kg}} \\ -12 \\ \hline 31 \\ -24 \\ \hline 72 \\ -72 \\ \hline 0 \end{array}$$

Box A **cannot** accommodate the total mass of 12 similar laptops.

Types of box	Mass of item
P	up to 10 kg
Q	10 kg to 20 kg

Based on the table, choose a suitable box to deliver the 12 laptops above. Discuss.

2.4.1 • Guide pupils to solve the mascot's question using "Trial and Error" method.

3 600 visitors attended a book fair on the first day. On the second day, the number of visitors increased by 70% compared to the first day. How many visitors attended the event on the second day?

Solution

Simplify the information.

Day	Number of visitors	Percentage of visitors
First	600	100%
Second	increased by 70% compared to the first day	100% + 70% = 170%

Calculate the number of visitors on the second day.

The total number of visitors on the second day is 170% of 600 visitors.

170% of 600 visitors = ☐

$$170\%\text{ of }600\text{ visitors} = \frac{170}{\cancel{100}_{1}} \times \cancel{600}^{6}\text{ visitors}$$

$$= 1\,020\text{ visitors}$$

$$\begin{array}{r} {}^{4} \\ 1\,7\,0\text{ visitors} \\ \times\quad 6 \\ \hline 1\,0\,2\,0\text{ visitors} \end{array}$$

Visitors on the second day:

Check the answer.

$$600\text{ visitors} + (70\% \times 600\text{ visitors}) = 600\text{ visitors} + \left(\frac{70}{\cancel{100}} \times 6\cancel{00}\text{ visitors}\right)$$

$$= 600\text{ visitors} + 420\text{ visitors}$$

$$= 1\,020\text{ visitors}$$

170% of 600 visitors = **1 020 visitors**

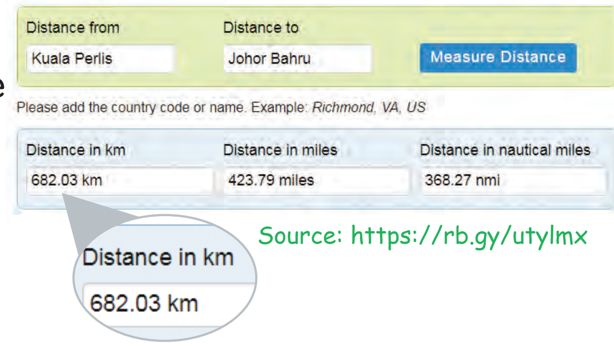
The number of visitors on the second day is **1 020**.

On the third day, the number of visitors increased by 30% compared to the second day. Calculate the total number of visitors on the third day.

TEACHER'S NOTES 2.4.1

- Guide pupils to understand and solve the problem using the partitioning method.

4 The information on the right shows a one-way travel distance of an express bus from Kuala Perlis to Johor Bahru. What is the back and forth travel distance of the bus, in km? State the answer in one decimal place.



Source: https://rb.gy/utylmx

Solution

Kuala Perlis → 682.03 km → Johor Bahru

Johor Bahru → 682.03 km → Kuala Perlis

Back and forth distance travelled by the bus:
2×682.03 km = ☐ km
Round off ☐ to one decimal place.

$$\begin{array}{r} \overset{1}{6}82.03 \text{ km} \\ \times \qquad 2 \\ \hline 1\,364.06 \text{ km} \\ \hline \end{array}$$

2×682.03 km = 1 364.06 km

Round off 1 364.06 km to one decimal place.

+1

1 364.0(6) km = **1 364.1** km

The back and forth travel distance is about **1 364.1** km.

Total up the back and forth distance to check the answer.

TRY THESE

Solve the problems.

a) The table shows the number of chickens in chicken coops A and B. How many chickens are there in chicken coop B?

Chicken coop	A	B
Number of chickens	120	$1\frac{1}{3}$ of the number of chickens in chicken coop A

b) A worker in Amira's Cake House prepared a cake batter with a mass of 15.48 kg. The batter was used to make 24 cakes of equivalent mass. Calculate the mass of one cake.

c) My brother spent RM230. My sister spent 150% of my brother's spending. Calculate my sister's expenditure.

TEACHER'S NOTES 2.4.1

TRY IT AGAIN

1 Calculate.

(a) $5 \times \frac{1}{7} =$ ☐ (b) $12 \times \frac{7}{8} =$ ☐ (c) $40 \times 1\frac{8}{9} =$ ☐ (d) $3\frac{5}{6} \times 24 =$ ☐

2 Find the product.

(a) $\frac{2}{3} \times \frac{7}{9} =$ ☐ (b) $\frac{5}{8} \times \frac{3}{5} =$ ☐ (c) $\frac{4}{7} \times \frac{2}{5} =$ ☐ (d) $\frac{1}{9} \times \frac{3}{4} =$ ☐

3 Solve these.

(a) $3\frac{1}{4} \times \frac{1}{5} =$ ☐ (b) $\frac{2}{9} \times 2\frac{9}{10} =$ ☐ (c) $1\frac{1}{3} \times 4\frac{4}{5} =$ ☐ (d) $2\frac{4}{9} \times 1\frac{3}{8} =$ ☐

4 Round off the decimals.

	Decimals	One decimal place	Two decimal places	Three decimal places
(a)	6.2471			
(b)	21.3895			
(c)	79.0546			

5 Complete the number sentences.

(a) $29.746 - 18.635 + 7.008 =$ ☐ (b) $5.2 + 86.276 - 88.19 =$ ☐

(c) $830.72 + 49.1 - 569.104 =$ ☐ (d) $27 - 0.008 + 6.05 =$ ☐

(e) $98.924 - 35 + 39.429 =$ ☐ (f) $100.01 + 20.002 - 45 =$ ☐

6 Calculate.

(a) $4 \times 3.097 =$ ☐ (b) $23 \times 58.9 =$ ☐ (c) $61 \times 74.45 =$ ☐

(d) $0.756 \times 10 =$ ☐ (e) $10.096 \times 100 =$ ☐ (f) $45.32 \times 1\,000 =$ ☐

7 Find the quotient.

(a) $6\,453 \div 1\,000 =$ ☐ (b) $42\,193 \div 1\,000 =$ ☐ (c) $507 \div 1\,000 =$ ☐

(d) $5.8 \div 4 =$ ☐ (e) $206.99 \div 35 =$ ☐ (f) $9\,574.096 \div 28 =$ ☐

(g) $84.7 \div 10 =$ ☐ (h) $1\,013 \div 100 =$ ☐ (i) $673.2 \div 100 =$ ☐

TEACHER'S NOTES 2.1.1, 2.2.1, 2.2.2, 2.2.3, 2.2.4

8 Find the values of p.

(a) $74.2 \times p = 742$ (b) $88.2 \div p = 0.882$ (c) $5\,632 \div p = 5.632$

(d) $0.375 \times p = 375$

9 Convert the mixed numbers to percentages.

(a) $1\frac{2}{5}$ (b) $2\frac{3}{4}$ (c) $4\frac{7}{10}$ (d) $5\frac{1}{2}$

10 Convert the percentages to mixed numbers.

(a) 130% (b) 270% (c) 421% (d) 505%

11 (a)

Box B contains 125% teabags of Box A.

20 teabags

How many teabags are there in Box B?

(b) Complete the table.

Targeted visitors	Percentage of attendance	Number of visitors
500	135%	

12 The table below shows the number of stamps collected by Syed Halim in January, February, and March.

Month	January	February	March
Number of stamps	80	88	96

Calculate the percentages of the number of stamps collected in:

(a) February compared to January. (b) March compared to January.

13 Solve the following problems.

(a) Dad donated $\frac{5}{6}$ of 120 storybooks to a local library. Are the remaining storybooks 20? Prove it.

(b) Mum poured 0.35 ℓ water out of a 1.5 ℓ jug. Then, she added 0.115 ℓ corn cordial into the jug.

(i) Calculate the volume of the corn drink.

(ii) Round off the volume of the corn drink to two decimal places.

(c) Madius is assigned to raise a flag during the independence month. The height of the pole is 6.096 m. Suggest the length of the rope needed. Provide your reason.

FUN TIME

Complete the following cross-number puzzle based on the questions below.

across

1. $3.45 \times 100 =$ ☐
2. Round off 82.098 to two decimal places.
3. $140.7 - 66.207 + 39.14 =$ ☐
4. $9\frac{1}{2} =$ ☐ %
5. Calculate 180% of 40.
6. $4\frac{1}{2} \times 2\frac{2}{3} =$ ☐

down

7. $539 \div 1\,000 =$ ☐
8. $602.4 \times$ ☐ $= 6\,024$
9. $0.86 + 64.372 - 5.82 =$ ☐
10. Round off 28.745 to one decimal place.
11. $3\frac{2}{5} =$ ☐ %
12. $65.76 \div 12 =$ ☐

1		9		5	10				
					2				7
			8						
12				11					
						6			
	3								
						4			

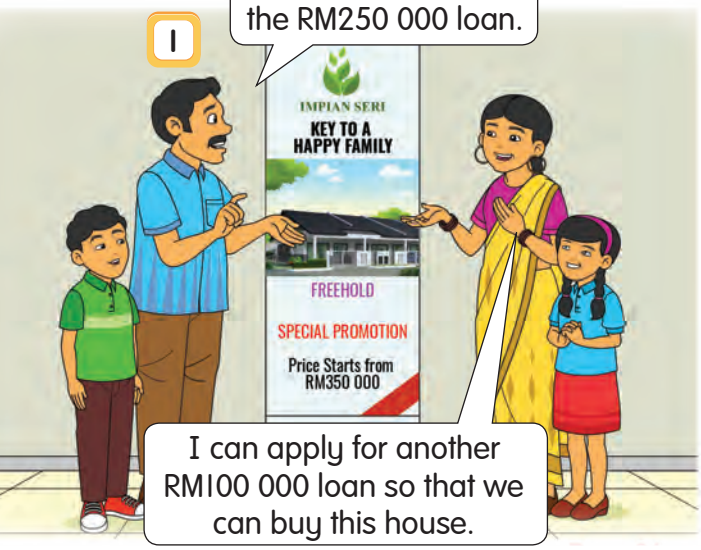
TEACHER'S NOTES

2.1.1, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.1, 2.3.2

3 MONEY

ADDITION OF MONEY

1



How much is the total loan the family needs?

RM250 000 + RM100 000 = ____

$$\begin{array}{r} \text{RM } 2\,5\,0\,0\,0\,0 \\ +\ \text{RM } 1\,0\,0\,0\,0\,0 \\ \hline \text{RM } 3\,5\,0\,0\,0\,0 \end{array}$$

RM250 000 + RM100 000
= **RM350 000**

The total loan the family needs is **RM350 000**.

2 Based on the table, how much is the total maximum cost if a philanthropist wants to bear the cost of heart bypass, open-heart surgery, and cancer treatment?

Types/ Treatment Cost	Minimum	Maximum
Heart Bypass	**RM25 000**	**RM60 000**
Heart Transplant	**RM50 000**	**RM100 000**
Open-Heart Surgery	**RM25 000**	**RM60 000**
Cancer	**RM5 000**	**RM150 000**

RM60 000 + RM60 000 + RM150 000 = ____

$$\begin{array}{r} \text{RM } 6\,0\,0\,0\,0 \\ +\ \text{RM } 6\,0\,0\,0\,0 \\ \hline \text{RM } 1\,2\,0\,0\,0\,0 \end{array} \rightarrow \begin{array}{r} \text{RM } 1\,2\,0\,0\,0\,0 \\ +\ \text{RM } 1\,5\,0\,0\,0\,0 \\ \hline \text{RM } 2\,7\,0\,0\,0\,0 \end{array}$$

Calculate the minimum cost for the three similar treatments.

RM60 000 + RM60 000 + RM150 000 = **RM270 000**

The total maximum cost is **RM270 000**.

3.1.1

- Emphasise that the addition of values of money is similar to the addition of whole numbers.
- Instil the values of helping and caring for each other.
- Discuss how to lead a healthy lifestyle.

3 RM43 026.70 + RM150 130.45 + RM387 060.20 = ▭

```
      1 1   1   1
RM    4 3 0 2 6 . 7 0
RM  1 5 0 1 3 0 . 4 5
+ RM 3 8 7 0 6 0 . 2 0
RM  5 8 0 2 1 7 . 3 5
```

TIPS
Add the sen, then the ringgit.

RM43 026.70 + RM150 130.45 + RM387 060.20 = **RM580 217.35**

4 RM246 750 + ▭ = RM610 525

A simple example.
4 + 7 = 11
7 = 11 – 4

```
        10 9  14
     5  0  10  4  12
RM   6  1  0   5  2  5
– RM 2  4  6   7  5  0
RM   3  6  3   7  7  5
```

RM246 750 + **RM363 775** = RM610 525

TRY THESE

1 Find the sum.

(a) RM639 251 + RM189 421 = ▭

(b) RM372 808.05 + RM473 210.95 + RM88 765.45 = ▭

(c) RM503 278.70 + RM198 036.35 + RM277 946.40 = ▭

(d) RM436 720 + RM333 821.85 + RM101 220.20 = ▭

2

Dad's savings

Bank	RM12 893.62
Investment	RM179 054.80
Tabung Haji	RM86 002.15

Dad's expenditure

Buying furniture	RM18 750
House renovation cost	RM12 000
Hajj cost (2 persons)	RM81 980

(a) Calculate the total of dad's savings.

(b) Calculate the cost of dad's expenditure.

3 ▭ + RM521 920 = RM780 634. What is the value of ▭ ?

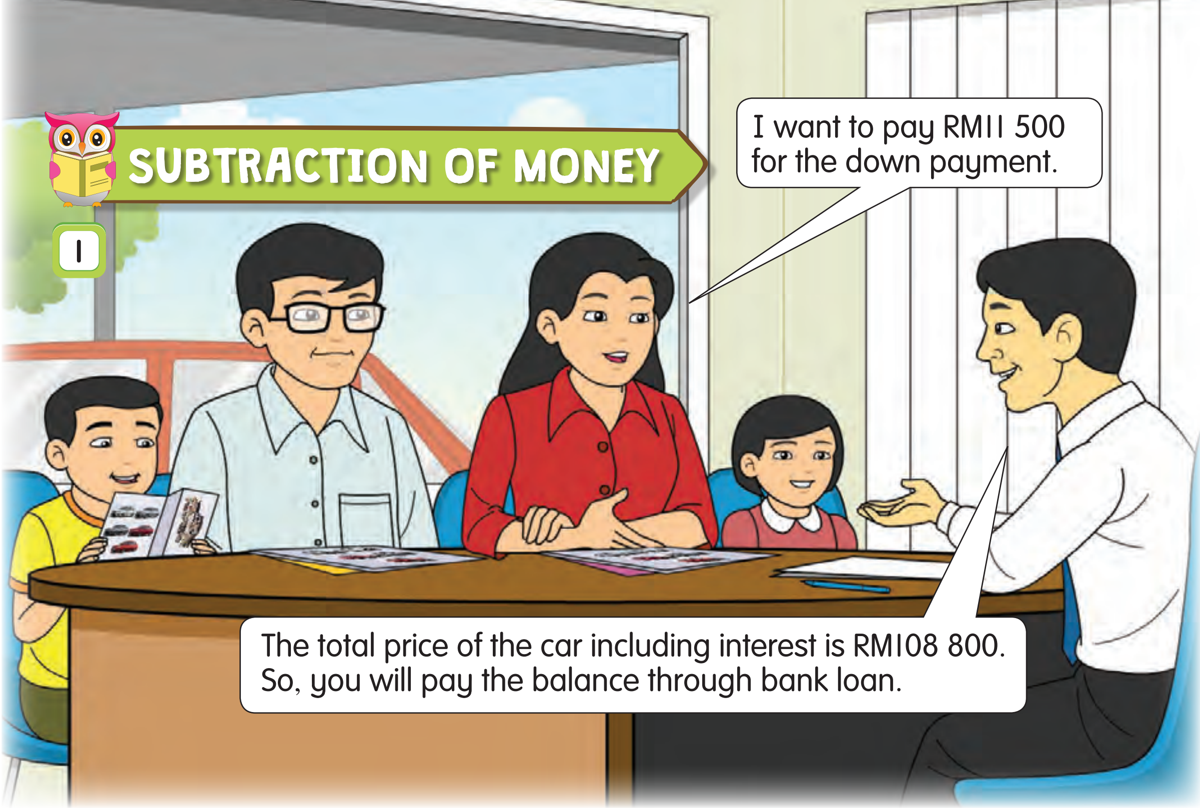
TEACHER'S NOTES

3.1.1

• Collect brochures or information regarding the prices of items such as luxury cars and houses. Carry out activities in pairs to add up two to three prices of items and check the answers of the other pairs.

SUBTRACTION OF MONEY

1



How much bank loan is needed by the mother?

RM108 800 – RM11 500 = ☐

	0	10				
RM	~~1~~	~~0~~	8	8	0	0
– RM		1	1	5	0	0
RM		9	7	3	0	0

RM108 800 – RM11 500 = **RM97 300**

The amount of bank loan needed by the mother is **RM97 300**.

If the father adds the down payment to be RM15 250, how much is the mother's current loan?

2 RM250 230 – RM31 879.50 = ☐

		9		11	12	9			
		4	10	1	2	10		10	0
RM	2	~~5~~	~~0~~	~~2~~	~~3~~	~~0~~	.	~~0~~	~~0~~
– RM		3	1	8	7	9	.	5	0
RM	2	1	8	3	5	0	.	5	0

write 0

Subtract the sen, then the ringgit.

TIPS

RM250 230 – RM31 879.50 = **RM218 350.50**

TEACHER'S NOTES

3.1.2
- Carry out a business simulation with a huge value of money.
- Ask pupils to show calculation on the provided A4 paper.

3 RM975 000.10 – RM69 680.80 – RM54 365 = ▭

```
   14 9 9 9                          12
  6 4 10 10 10  11 0              8 10 4 2 11
  RM9 7 5 0 0 0 . 1 0        →  RM9 0 5 3 1 9 . 3 0
– RM  6 9 6 8 0 . 8 0        – RM  5 4 3 6 5 . 0 0
  RM9 0 5 3 1 9 . 3 0          RM8 5 0 9 5 4 . 3 0
```

RM975 000.10 – RM69 680.80 – RM54 365 = **RM850 954.30**

4 ▭ – RM110 620 = RM465 318

A simple example.

8 – 2 = 6

8 = 6 + 2

```
  RM4 6 5 3 1 8
+ RM1 1 0 6 2 0
  RM5 7 5 9 3 8
```

RM575 938 – RM110 620 = RM465 318

TRY THESE

1 Calculate.

a) RM104 876 – RM87 014 = ▭

b) RM294 099 – RM187 272 – RM54 201.20 = ▭

c) RM687 001.25 – RM450 862.05 – RM92 655.35 = ▭

d) RM820 683 – RM273 115.70 – RM474 505.19 = ▭

e) RM547 253.30 – RM88 265.90 – RM398 473.45 = ▭

2

Savings	RM250 138.70
Business capital	RM85 250
Buying furniture	RM16 745

Based on the information given, calculate the balance of savings.

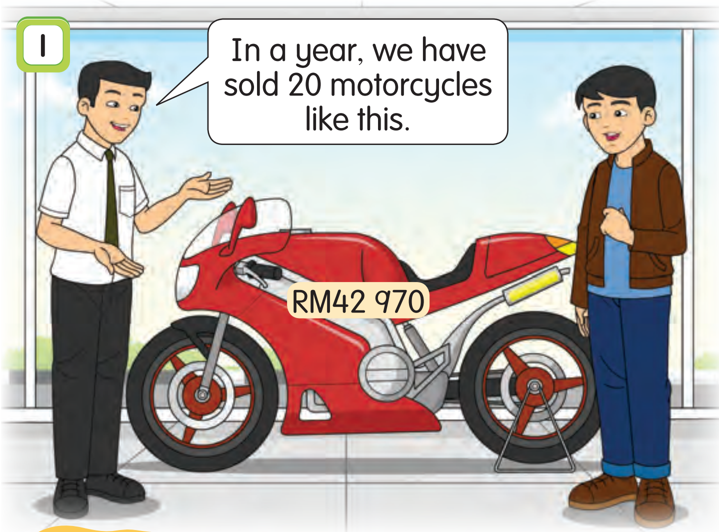
3 RM410 973 – ▭ = RM286 342. What is the value of ▭ ?

TEACHER'S NOTES 3.1.2

- Provide extra exercises on subtraction of values of money involving regrouping.
- Carry out role-play activity such as *Guru Muda* to assist pupils with multiple intelligences to master subtraction of values of money.

MULTIPLICATION OF MONEY

1



Calculate the amount of sales for 20 motorcycles.

20 × RM42 970 = ▢

Method 1

$$\begin{array}{rr} & \text{RM}\,4\,2\,9\,7\,0 \\ \times & 2\,0 \\ \hline & \text{RM}\,8\,5\,9\,4\,0\,0 \\ \hline \end{array}$$

Method 2

20 × RM42 970 = (10 × 2) × RM42 970
= 10 × RM42 970 × 2
= RM429 700 × 2
= RM859 400

20 × RM42 970 = **RM859 400**

The amount of sales for 20 motorcycles is **RM859 400**.

2 Multiply RM38 921.60 by 10.

10 × RM38 921.60 = ▢

10 × RM38 921.60 = RM389 216.00

10 × RM38 921.60 = **RM389 216**

3

a. 100 × RM6 240.70 = RM624 070

▢ × RM6 240.70 = RM62 407

b. 1 000 × RM284.15 = RM284 150

100 × ▢ = RM28 415

Complete a and b.

BRAIN TEASER

100 × RM7 920.50 = **RM792 050** 10 × RM79 205 = **RM792 050**

Construct another number sentence with **RM792 050** as the answer.

TEACHER'S NOTES 3.1.3

- Emphasise that the multiplication of values of money involving ringgit and sen is similar to the multiplication of decimal numbers.

4 Calculate the product of 79 and RM1 499.80.

79 × RM1 499.80 = ____

Method 1

```
        3 6 6 5
        4 8 8 7
   RM   1 4 9 9.8 0
 ×                 7 9
 ---------------------
       1 1 1
     1 3 4 9 8 2 0
+  1 0 4 9 8 6 0 0
 ---------------------
   RM 1 1 8 4 8 4.2 0
```

79 × RM1 499.80 = **RM118 484.20**

Method 2

79 × RM1 499.80
= (80 − 1) × RM1 499.80
= (80 × RM1 499.80) − (1 × RM1 499.80)

```
        3 7 7 6
   RM   1 4 9 9.8 0
 ×               8 0
 ---------------------
   RM 1 1 9 9 8 4.0 0

          17 13
        8 7 3  10 0
   RM 1 1 9 9 8 4.0 0
− RM   1 4 9 9.8 0
 ---------------------
   RM 1 1 8 4 8 4.2 0
```

5 14 × RM23 769.05 = ____

```
        1 3 2 3   2
   RM   2 3 7 6 9.0 5
 ×                 1 4
 ---------------------
       1 1   1
     9 5 0 7 6 2 0
+  2 3 7 6 9 0 5 0
 ---------------------
   RM 3 3 2 7 6 6.7 0
```

14 × RM23 769.05 = **RM332 766.70**

TRY THESE

1 Quick calculation.

(a) 10 × RM47 550.85 = ____

(b) 100 × RM2 460.32 = ____

(c) 1 000 × RM799.68 = ____

2 Calculate the total price.

	Item	Quantity	Price per unit	Total price
(a)	Terrace house	3	RM286 900	
(b)	Air purifier	56	RM1 730	
(c)	Refrigerator	70	RM3 497	

3 Find the products.

(a) 5 × RM198 673 = ____

(b) 30 × RM29 564 = ____

(c) 69 × RM2 157.90 = ____

TEACHER'S NOTES 3.1.3

- Provide extra exercises on multiplication involving values of money and 2-digit numbers including ringgit and sen.

DIVISION OF MONEY

1

What is the value of donation for each charity?

RM650 000 ÷ 4 = ☐

```
       RM 1 6 2  5 0 0
    4 ) RM 6 5 0  0 0 0
         − 4
           2 5
         − 2 4
             1 0
           −   8
               2  0
             − 2  0
                  0 0
                −   0
                    0 0
                  −   0
                      0
```

TIPS

Divide every digit from left to right.

RM650 000 ÷ 4 = **RM162 500**

The value of donation for each charity is **RM162 500**.

2

a

RM317 659 ÷ 10 = ☐

RM317 659 ÷ 10 = RM31 765.90

RM317 659 ÷ 10 = **RM31 765.90**

b

RM648 321 ÷ 100 = ☐

RM648 321 ÷ 100 = RM6 483.21

RM648 321 ÷ 100 = **RM6 483.21**

c

RM550 200 ÷ 1 000 = ☐

RM550 200 ÷ 100 = ☐

RM550 200 ÷ 10 = ☐

Try to complete these three number sentences.

TEACHER'S NOTES

3.1.4 • Carry out an impromptu quiz involving the division of values of money by 10, 100 and 1 000.

3 Calculate the quotient of RM578 404.20 and 30.

RM578 404.20 ÷ 30 = ☐

```
          RM   1 9  2 8 0 . 1 4
30) RM 5 7 8  4 0 4 . 2 0
     −3 0
       2 7 8
     −2 7 0
           8  4
         −6  0
           2  4 0
         −2  4 0
                0 4
              −   0
                  4  2
                −3  0
                  1  2 0
                −1  2 0
                       0
```

RM578 404.20 ÷ 30
= **RM19 280.14**

4 RM396 810 ÷ 25 = ☐

```
          RM   1 5  8 7 2 . 4 0
25) RM 3 9 6  8 1 0 . 0 0
     −2 5
       1 4 6
     −1 2 5
         2 1  8
       −2 0  0
            1  8 1
          −1  7 5
                 6 0
               −5 0
                 1 0 0
               −1 0 0
                     0 0
                   −   0
                       0
```

TIPS

The division of values of money must be completed until there is no remainder.

RM396 810 ÷ 25
= **RM15 872.40**

BRAIN TEASER

RM701 090 ÷ ☐	as	☐ ÷ 10	as	☐ ÷ ☐
RM701.09		RM70 109		RM7 010.90

TRY THESE

1 Quick calculation.

a) RM342 870 ÷ 100 = ☐

b) RM765 109 ÷ 10 = ☐

c) RM519 600 ÷ 1 000 = ☐

d) RM842 300 ÷ 1 000 = ☐

2 Calculate the quotient.

a) RM302 500 ÷ 4 = ☐

b) RM207 168 ÷ 13 = ☐

c) RM857 204.25 ÷ 35 = ☐

d) RM616 564.80 ÷ 24 = ☐

e) RM750 580 ÷ 16 = ☐

f) RM923 056 ÷ 40 = ☐

TEACHER'S NOTES

3.1.4

- Ask pupils to solve example 4 using the following number sentence: RM396 810 ÷ 5 ÷ 5 = ☐ . Then, ask them to make a conclusion.

MIXED OPERATIONS INVOLVING MONEY

1

Date	Code	Document No.	Withdrawal (RM)	Deposit (RM)	Balance (RM)
1/01/2021	BAL B/F				6 800.00
31/01/2021		ATM TRF		150.00	
28/02/2021		ATM TRF		150.00	
31/03/2021		ATM TRF		150.00	

Based on the bank statement above, how much is the balance on 31 March 2021?

RM6 800 + 3 × RM150 = ☐

RM6 800 + 3 × RM150
= RM6 800 + RM450
= RM7 250

RM6 800

RM6 800 + 3 × RM150 = **RM7 250**

The balance on 31 March 2021 is **RM7 250**.

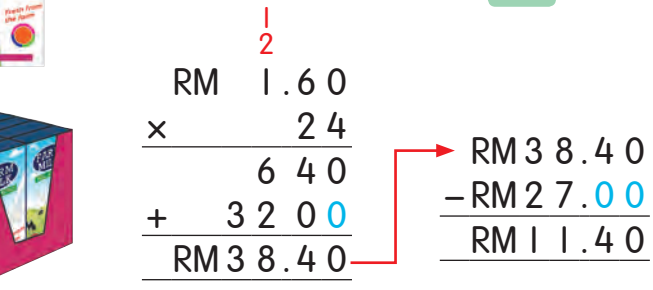
2

Retail price
RM1.60
per box

Wholesale price
RM27
24 boxes

Calculate the price difference of 24 boxes of milk between wholesale and retail.

24 × RM1.60 – RM27 = ☐



24 × RM1.60 – RM27 = **RM11.40**

The price difference of 24 boxes of milk between wholesale and retail is **RM11.40**.

TEACHER'S NOTES

3.2.1 (i)
3.2.1 (ii)

- Carry out simulation using play money to guide pupils to understand the mixed operation concept.
- Discuss the saving made in purchase between retail and wholesale.

3

Apartment Monthly Living Cost

Cost	Rent	Maintenance
Value	RM750	RM56.80

Based on the table, how much is the total cost of living for 15 months?

(RM750 + RM56.80) × 15 = ▭

First, solve the operation in the brackets. Then, multiply.

```
      1
  RM 7 5 0 . 0 0
+ RM   5 6 . 8 0
  RM 8 0 6 . 8 0
```

```
              3 4
RM      8 0 6 . 8 0
×               1 5
         1 1
      4 0 3 4 0 0
+     8 0 6 8 0 0
RM 1 2  1 0 2 . 0 0
```

(RM750 + RM56.80) × 15 = **RM12 102**

The total cost of living for 15 months is **RM12 102**.

4

Monthly money record

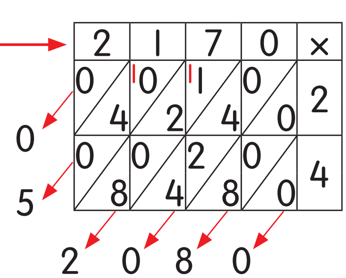
Nett salary RM2 350

Family savings RM180

Based on the information, calculate the expenses for 2 years if the balance of the money is all spent.

(RM2 350 – RM180) × 24 = ▭

```
        2 15
RM 2  3 5 0
– RM    1 8 0
RM 2  1 7 0
```



2 years = 24 months

RM2 170 × 24 = RM52 080

(RM2 350 – RM180) × 24 = **RM52 080**

The expenses for 2 years if the balance of the money is all spent is **RM52 080**.

TEACHER'S NOTES

3.2.1 (i)
3.2.1 (ii)

- Emphasise that the operation in the brackets should be solved first.
- Vary calculation methods according to pupils' level.

5

Calculate the first month payment.

RM1 140 + RM3 120 ÷ 12 = ▭

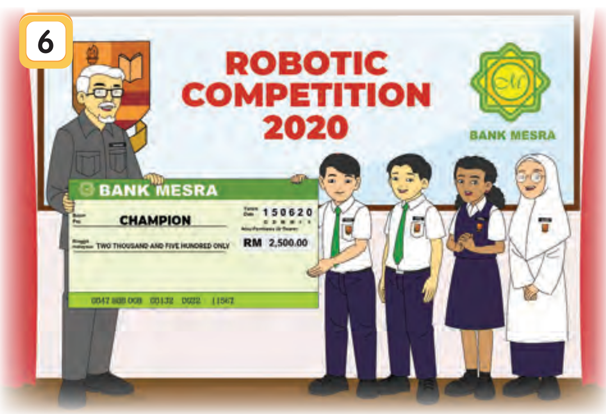
```
       RM  2 6 0
12 ) RM 3 1 2 0
      – 2 4
          7 2
        – 7 2
          0 0
        –   0
            0

         1
   RM    2 6 0
 + RM 1  1 4 0
   RM 1  4 0 0
```

RM1 140 + RM3 120 ÷ 12 = **RM1 400**

The first month payment is **RM1 400**.

6



How much is the balance of Reza's money after buying the watch?

RM2 500 ÷ 4 – RM89.90 = ▭

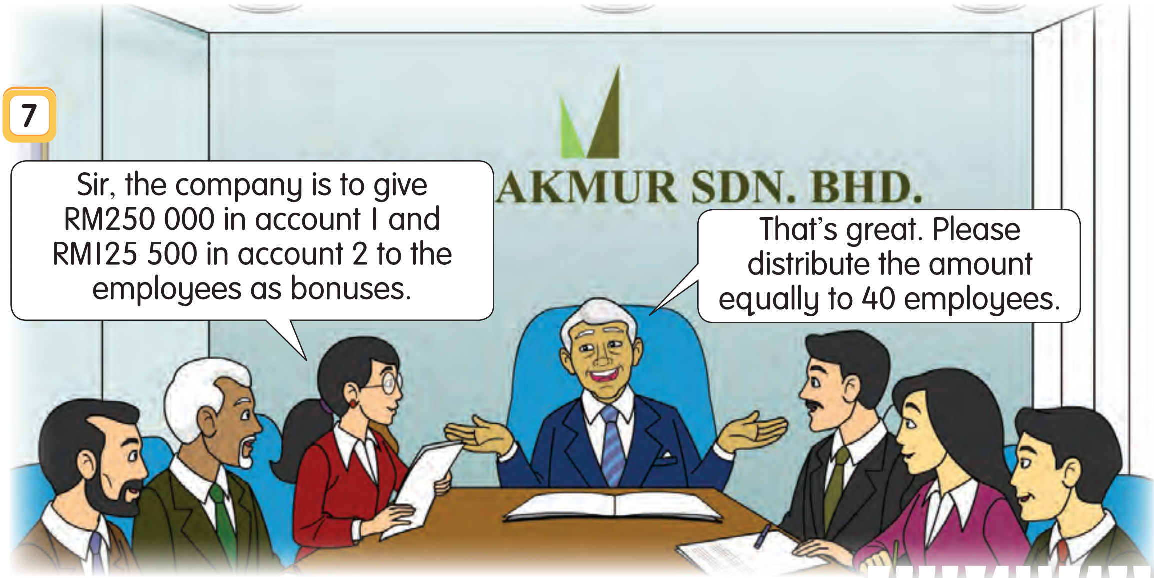
```
      RM  6 2 5
4 ) RM 2 5 0 0
     – 2 4
         1 0
       –   8
         2 0
       – 2 0
           0

        11 14
      5  ✗  ✗   10 0
  RM  6  2  5 . 0  0
– RM     8  9 . 9  0
  RM  5  3  5 . 1  0
```

RM2 500 ÷ 4 – RM89.90 = **RM535.10**

The balance of Reza's money after buying the watch is **RM535.10**.

7



Calculate the amount of bonus to be received by each employee.

(RM250 000 + RM125 500) ÷ 40 = ▭

Bonus is an additional payment besides the salary.

MIND TRIGGER

Method 1

```
  RM2 5 0 0 0 0
+ RM1 2 5 5 0 0
  RM3 7 5 5 0 0
```

```
      RM      9 3 8 7 . 5 0
40 ) RM3 7 5 5 0 0 . 0 0
   – 3 6 0
       1 5 5
     – 1 2 0
         3 5 0
       – 3 2 0
           3 0 0
         – 2 8 0
             2 0 0
           – 2 0 0
                 0 0
               –   0
                   0
```

Method 2

(RM250 000 + RM125 500) ÷ 40
= RM375 500 ÷ 4 ÷ 10

```
     RM   9 3 8 7 5
4 ) RM3 7 5 5 0 0
  – 3 6
      1 5
    – 1 2
        3 5
      – 3 2
          3 0
        – 2 8
            2 0
          – 2 0
              0
```

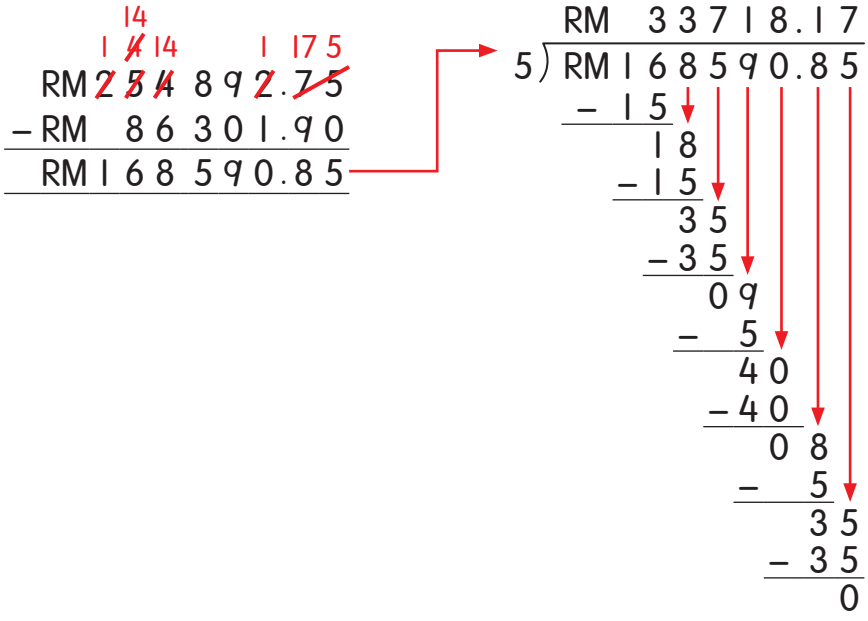
RM93 875.00 ÷ 10 = ▭

(RM250 000 + RM125 500) ÷ 40 = ▭

The amount of bonus to be received by each employee is ▭ .

TEACHER'S NOTES 3.2.1 (iii)
- Emphasise that the operation in the brackets should be solved first.
- Vary calculation methods according to pupils' level.

8 (RM254 892.75 – RM86 301.90) ÷ 5 = ☐



(RM254 892.75 – RM86 301.90) ÷ 5 = **RM33 718.17**

TRY THESE

1 Solve these.

(a) RM1 502 + 7 × RM2 865 = ☐

(b) 5 × RM4 857 – RM2 142.80 = ☐

(c) RM45 193.05 + RM28 837.25 × 12 = ☐

(d) RM653 008 – RM25 842.70 × 16 = ☐

(e) RM284 703.80 + RM43 879 ÷ 25 = ☐

(f) RM109 275.60 – RM32 760 ÷ 18 = ☐

2 Calculate.

(a) (RM3 484.65 + RM4 092.80) × 9 = ☐

(b) (RM192 558.80 ÷ 28) – RM5 854.75 = ☐

(c) RM118 549.45 – (26 × RM4 091.90) = ☐

(d) RM767 041.88 + (RM505 050 ÷ 100) = ☐

TEACHER'S NOTES

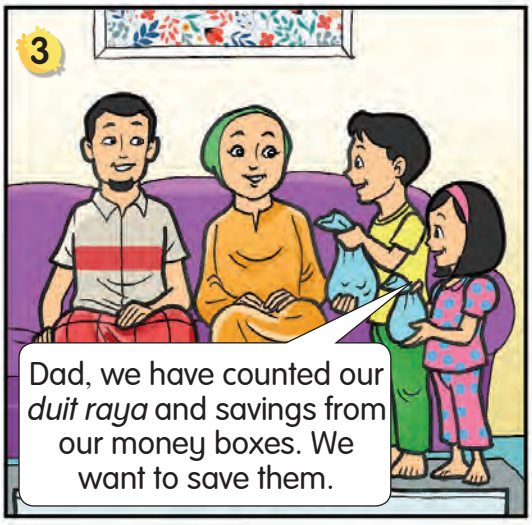
3.2.1 • Encourage pupils to check the answers using calculators.

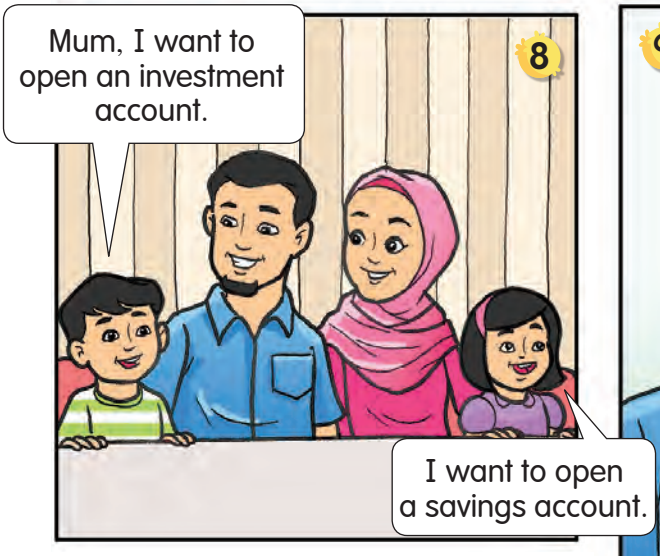
SAVE AND INVEST

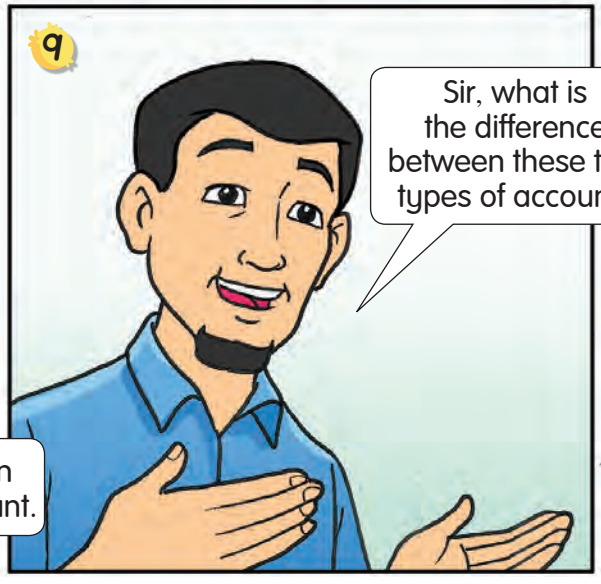
SAVINGS ACCOUNT

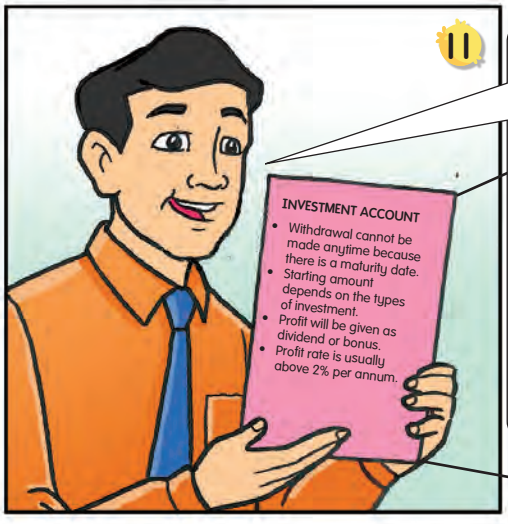
- Money can be saved or deposited.
- Withdrawal can be made at any time.
- Starting saving amount is low.
- Entitled for interest.
- 1% to 2% interest rate per annum.

- Visit various bank websites for more information regarding savings and investment. Discuss the findings in class.









On the other hand, investment is the money used for a certain business that will give profit in the future. Here are some information about the investment account.

INVESTMENT ACCOUNT

- Withdrawal cannot be made anytime because there is a maturity date.
- Starting amount depends on the types of investment.
- Profit will be given as dividend or bonus.
- Profit rate is usually above 2% per annum.

TEACHER'S NOTES

3.3.1

- Discuss the advantages of keeping money in the bank compared to at home.

SIMPLE INTEREST AND COMPOUND INTEREST

simple interest for the first year

Year	Balance at the beginning of the year	Interest rate	Amount of interest	Balance at the end of the year
First	RM2 000	1.8%	RM36	RM2 036
Second	RM2 036	1.8%	RM36.65	RM2 072.65
Third	RM2 072.65	1.8%	RM37.31	RM2 109.96

compound interest for second and third year

Simple interest is an amount of money received by anyone who saves money in a bank within a period of time.

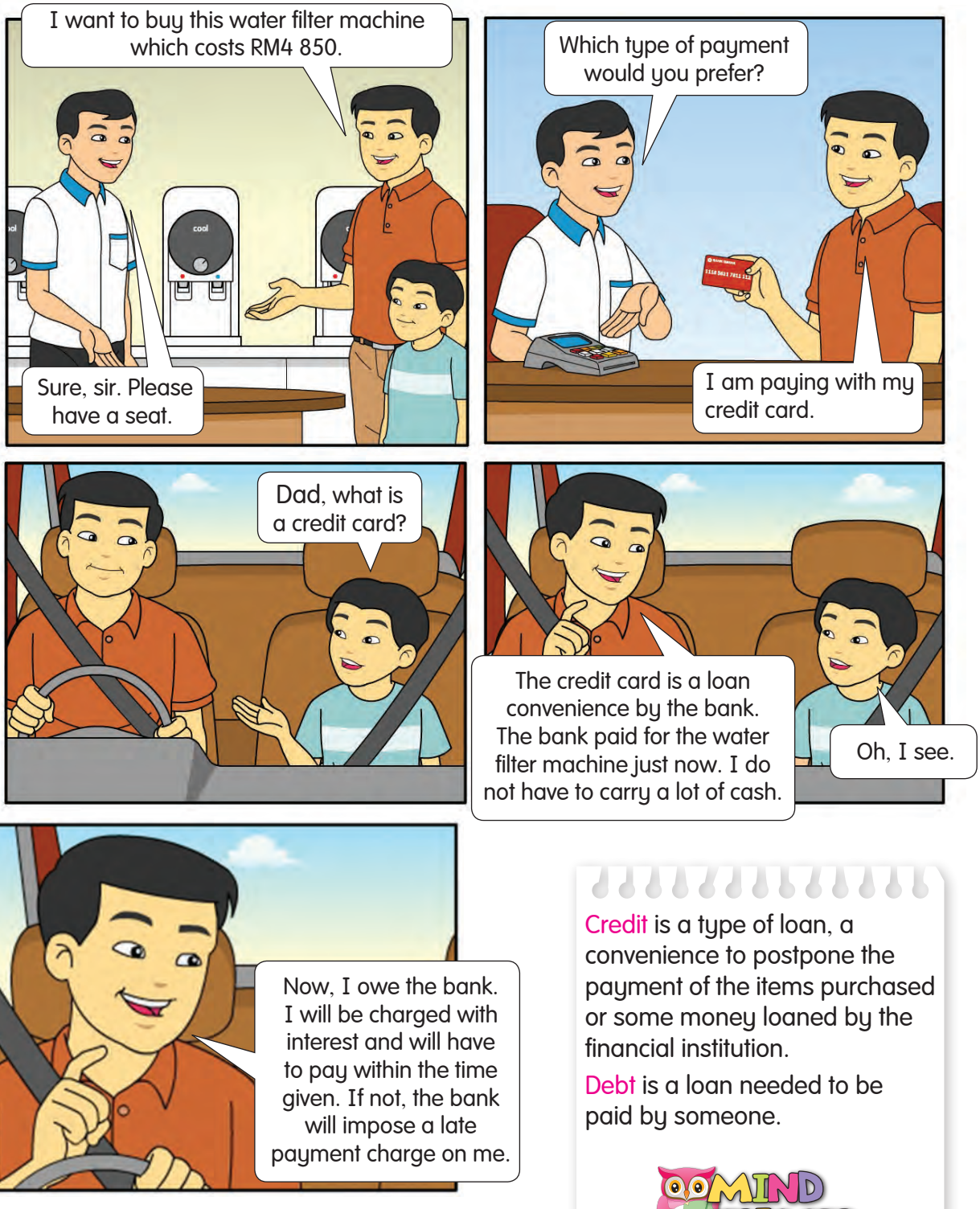
Compound interest is an interest received from the savings and interest collected each year.

MIND TRIGGER

TEACHER'S NOTES 3.3.2

- Carry out group activities to get the simple interest and compound interest offers from various bank websites and compare them.

CREDIT AND DEBT



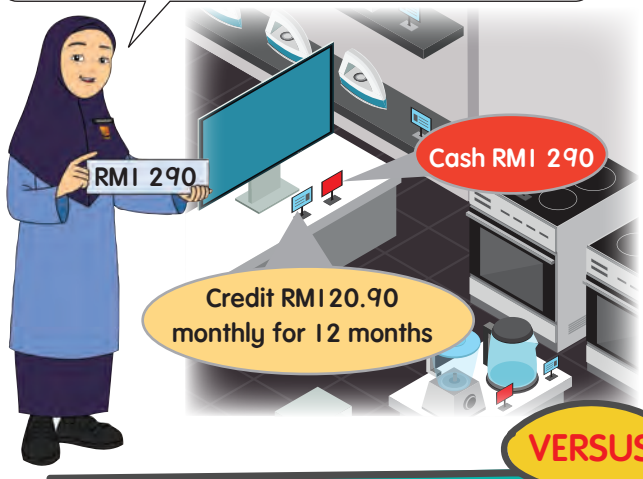
Credit is a type of loan, a convenience to postpone the payment of the items purchased or some money loaned by the financial institution.

Debt is a loan needed to be paid by someone.

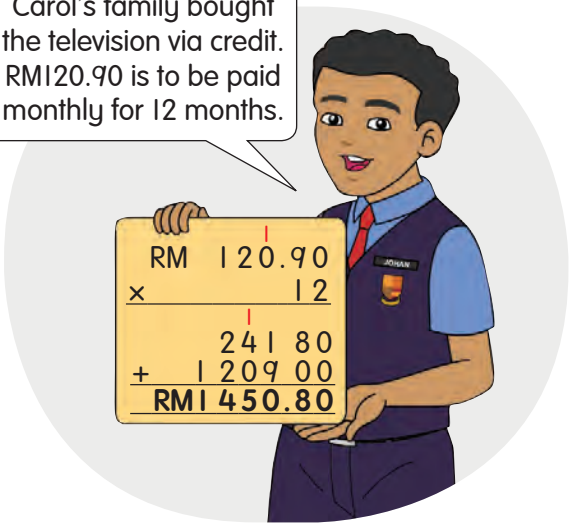
MIND TRIGGER

PURCHASING VIA CREDIT AND CASH

Andrew's family bought the television via cash. RM1 290 was paid in lump sum.



Carol's family bought the television via credit. RM120.90 is to be paid monthly for 12 months.



VERSUS

PURCHASING VIA CASH

- Not in debt.
- No interest.
- Paying for the actual price.
- Payment is made in full cash or debit card.

PURCHASING VIA CREDIT

- In debt.
- Interest is imposed.
- Paying more than actual price.
- Payment via credit card and monthly instalment.

SMART TRAIL

WHAT DO YOU WANT TO DO?

SCAN THIS

What do you want to do? (repeat twice)
Do you want to save or invest? (repeat twice)
Help me with the savings and investment (repeat twice)
Let's go to the bank… to the bank… to the bank…
Asking for advice… for advice (repeat twice)
Yes, yes, yes, yes… can save and invest (repeat twice)

The money saved…
Receive the interest on the first year of saving… (repeat twice)
Yeay…the interest (repeat four times)
Yes, yes, yes, yes… savings account
Simple interest that's the name
Yes, yes, yes (repeat twice)
The money saved… the money saved
Receive interest on the second year of saving… (repeat twice)
Yeay… compound interest

TEACHER'S NOTES

3.4.2

- Discuss the benefits of cash purchase compared to credit.
- Sing the "What Do You Want To Do?" song using the tune of "Twinkle Twinkle Little Star".

TRY THESE

1 Match the word with the meaning.

Savings	An amount of money received by anyone who saves money in a bank within a certain period of time.
Investment	A convenience to postpone the payment of the items purchased or some money loaned by the financial institution.
Simple interest	The money kept or deposited and can be used when necessary.
Compound interest	The money used for a certain business that will give profit.
Credit	A loan needed to be paid by someone.
Debt	An interest received from the savings and interest collected each year.

2 Read and answer the questions.

(a) Vickson can keep and withdraw his money easily. What is his account type?

(b) Jagdeep keeps his money and receives profit in the form of dividend. Name his account type.

(c) Angeline did not withdraw her savings for three years. Name the interest received from the savings she has not withdrawn.

3 Provide three differences between purchasing via credit and purchasing via cash.

SOLVE THE PROBLEMS

1 Ramesh bought a bicycle as shown in the picture via credit. He has to pay RM120 per month for the bicycle for 24 months. How much is the price of the bicycle?

Understand the problem

- Monthly payment of RM120.
- 24 months instalment period.
- Find the price of the bicycle.

Plan the strategy

1 month → RM120

24 months → 24 × RM120 = ☐

Solve

24 × RM120 = ☐

$$\begin{array}{r} \text{RM}\,120 \\ \times\quad 24 \\ \hline 480 \\ +\quad 2400 \\ \hline \text{RM}2880 \end{array}$$

Check

$$\begin{array}{r} \text{RM}\quad 120 \\ 24\overline{)\,\text{RM}2880} \\ -\quad 24\downarrow \\ \hline 48 \\ -\,48\downarrow \\ \hline 00 \\ -\quad 0 \\ \hline 0 \end{array}$$

24 × RM120 = **RM2 880**

The price of the bicycle is **RM2 880**.

Kok Keong bought a bicycle too. He has to pay RM180 monthly for 15 months. Whose bicycle is more expensive, Kok Keong's or Ramesh's? Discuss.

TEACHER'S NOTES 3.5.1

- Provide more exercises on identifying the keyword to determine the operation and write the number sentence to solve the problem.
- Discuss the benefits of a suitable instalment period and to spend within our means.

2 Daren's father bought 2 sets of sports attire for Daren and his brother. His father paid RM500. How much is the balance?

Price of one set of sports attire RM238.90

Understand the problem

- The price of 1 set of sports attire is RM238.90.
- Bought 2 sets of sports attire.
- Paid RM500.
- Calculate the balance.

Plan the strategy

RM500		
RM238.90	RM238.90	balance

Solve

RM500 – 2 × RM238.90 = ☐

$$\begin{array}{r} \scriptstyle 1\ 1\ \ \ \ \\ \text{RM}238.90 \\ \times \qquad\quad 2 \\ \hline \text{RM}477.80 \end{array}$$

$$\begin{array}{r} \scriptstyle 9\ 9\ \ \ \ \ \ \\ \scriptstyle 4\ 10\ 10\ 10\ 0 \\ \text{RM}\not{5}\not{0}\not{0}.\not{0}0 \\ - \ \text{RM}477.80 \\ \hline \text{RM}\ \ 22.20 \end{array}$$

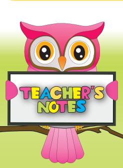
Check

$$\begin{array}{r} \scriptstyle 1\ 2\ 2\ \ \ \ \\ \text{RM}238.90 \\ \text{RM}238.90 \\ + \ \text{RM}\ \ 22.20 \\ \hline \text{RM}500.00 \end{array}$$

RM500 – 2 × RM238.90 = **RM22.20**

The balance is **RM22.20**.

During a sales promotion, the price of the same set of sports attire was decreased by RM23.40. How much is the price of 2 sets of sports attire during the promotion?



3.5.1 • Guide pupils to identify important information based on the question cards given to solve the problem.

3 Hani saves RM3.50 of her pocket money every week as she would like to buy a watch that costs RM300. Her mother adds RM2.50 every week to encourage her. Will Hani achieve her target by the 40th week?

Solution

Week	Save	Amount given by mother	Total
1	RM3.50	RM2.50	
2	RM3.50	RM2.50	
3	RM3.50	RM2.50	
4	RM3.50	RM2.50	
5	RM3.50	RM2.50	

Total amount of money in a week.

RM3.50 + RM2.50 = ____

Total amount of money on the 40th week.

(RM3.50 + RM2.50) × 40 = ____

```
   RM3 . 5 0
+  RM2 . 5 0
   RM6 . 0 0
```

```
   RM   6
×       4 0
   RM2 4 0
```

Price of a watch	Savings
RM300	RM240

RM240 is less than RM300.

(RM3.50 + RM2.50) × 40 = **RM240**

Hani's target will **not be achieved** on the 40th week.

On which week will Hani's target be achieved? Discuss.

TEACHER'S NOTES

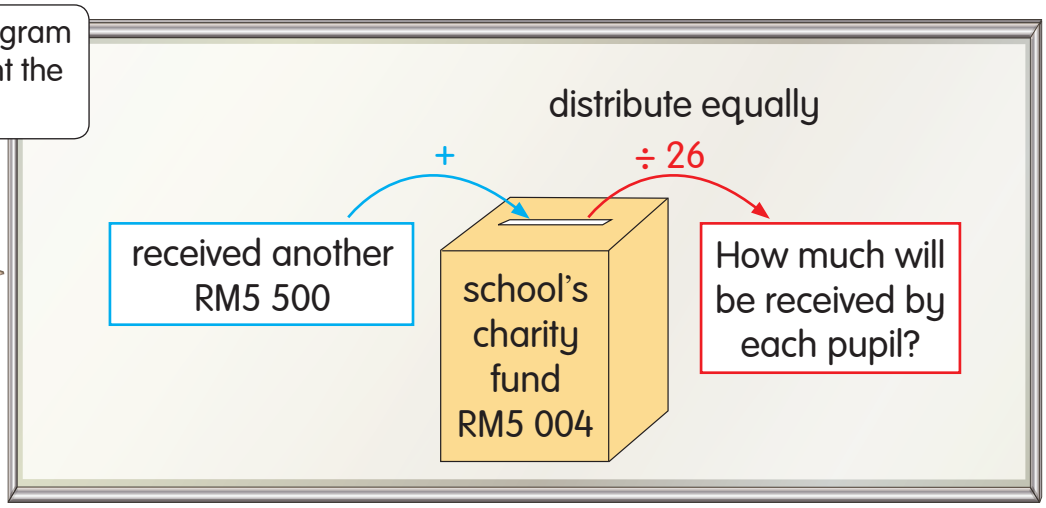
3.5.1

- Compare and contrast with friend's answers to ensure the number sentence formed is accurate.
- Encourage the practice of saving.

4 A school's charity fund has a total of RM5 004. The school received another RM5 500. The total amount of money will be distributed equally among 26 selected pupils. What is the value of money received by each pupil?

Solution

Draw a diagram to represent the problem.



(RM5 004 + RM5 500) ÷ 26 = ____

$$\begin{array}{r} \text{RM}\ 5004 \\ +\ \text{RM}\ 5500 \\ \hline \text{RM}\ 10504 \end{array}$$

$$\begin{array}{r} \text{RM}\ 404 \\ \hline 26\overline{)\text{RM}\ 10504} \\ -\ 104 \\ \hline 104 \\ -\ 0 \\ \hline 104 \\ -\ 104 \\ \hline 0 \end{array}$$

Check your answer. Multiply RM404 by 26. Then, subtract the answer with RM5 500.

(RM5 004 + RM5 500) ÷ 26 = **RM404**

Each pupil will receive **RM404**.

TRY THESE

Solve the following problems.

(a) The note on the right shows a financial planning of Winnie's mother.
Her mother wishes to distribute some amount of her retirement money equally to her 5 children.

Retirement fund	RM145 358.70
Total amount of money for the children	RM12 000
Vacation expenses	RM5 750
Investment	RM?

(i) How much money will each child receive?

(ii) Calculate the amount of investment made by Winnie's mother.

(b) Jason's sister keeps RM250 every month. After 36 months, she withdraws RM7 850 to pay the down payment for a car. If the savings interest is not included, calculate the balance of her savings.

(c) A company distributes RM102 000 annual profit to 32 workers equally. Each worker will receive another RM1 200 in conjunction with the company's 10th anniversary. Calculate the total amount of money received by each worker.

(d) A school decided to use a total of RM23 250 from the teachers and Parent-Teacher Association fund to buy 7 gazebos as a waiting facility. The cost of each gazebo is RM3 800.

RM3 800

(i) What is the cost of 7 gazebos?

(ii) Calculate the additional amount of money needed.

(e) Izati's father bought a motorcycle via credit.
The price of purchasing via cash and credit is as shown.

Cash RM21 500

Credit
72 months × RM438

(i) What is the price of the motorcycle via credit?

(ii) Calculate the difference in price between cash and credit purchase.

TEACHER'S NOTES

3.5.1

- Conduct a station activity to solve all of the questions above so that each group can compare the solutions with another group.
- Guide the groups which face problems or make mistakes.

TRY IT AGAIN

1 Solve these.

(a) RM59 183 + RM64 040.45 = ____

(b) RM199 670 – RM86 929.50 = ____

(c) RM208 074.65 + RM376 942 + RM87 294.25 = ____

(d) RM330 291 – RM270 328.70 – RM5 959.40 = ____

2 Complete these.

(a) RM275 432.80 + ____ = RM511 632.10

(b) ____ – RM72 669.30 = RM325 174.65

3 The table below shows incomes of two companies within two months.

Month	Syarikat Maju Bina Sdn. Bhd.	Syarikat Ilham Sdn. Bhd.
March	RM128 920	RM136 004
April	RM180 017	RM89 426

(a) Calculate the total income of each company for these two months.

(b) How much is the income difference in March for both companies?

4 Calculate the product.

(a) 18 × RM27 342 = ____

(b) 22 × RM36 729 = ____

(c) 30 × RM28 653.25 = ____

(d) 63 × RM14 315.80 = ____

(e) 100 × RM6 382.50 = ____

(f) 1 000 × RM730.40 = ____

5 Calculate the quotient.

(a) RM135 387 ÷ 7 = ____

(b) RM834 784 ÷ 16 = ____

(c) RM101 940.20 ÷ 53 = ____

(d) RM281 205 ÷ 90 = ____

(e) RM564 849 ÷ 100 = ____

(f) RM467 370 ÷ 1 000 = ____

6 Complete these.

(a) ☐ × RM3 086.20 = RM308 620

(b) 100 × ☐ = RM32 945

(c) RM298 760 ÷ ☐ = RM2 987.60

(d) ☐ ÷ 1 000 = RM74.80

7 Calculate.

(a) RM99 447.90 – 18 × RM4 302.05 = ☐

(b) RM450 270.80 ÷ 56 + RM37 820.35 = ☐

(c) 26 × RM6 935.10 + RM495 008.55 = ☐

(d) RM810 466.30 – RM348 667 ÷ 20 = ☐

8 Solve these.

(a) 8 × (RM42 842.40 – RM36 719.55) = ☐

(b) (RM91 263.15 + RM16 270.20) ÷ 19 = ☐

(c) (RM6 500.20 + RM10 460.95) × 41 = ☐

(d) (RM380 704 – RM150 820) ÷ 60 = ☐

9 Scan the QR Code to complete the crossword puzzle based on the sentences below.

SCAN THIS

ACROSS	DOWN
1 ☐ interest is the interest received from the savings and interest collected each year.	1 The bank provides the convenience of ☐ so that we can postpone the payment of items purchased.
2 The loan that needs to be paid for buying a car is called ☐.	5 ☐ is the money used for a certain business that will give profit in the future. For example, in purchasing shares and becoming a cooperation member.
3 The savings that is not withdrawn on the first year will receive the ☐ interest.	6 Purchasing via ☐ does not get us into debt.
4 The money kept or deposited and can be used when necessary is ☐.	

TEACHER'S NOTES

3.1.3, 3.1.4, 3.2.1, 3.3.1, 3.3.2, 3.4.1

10 Wafiq's brother decides to buy a laptop as shown in the picture. Based on the information, provide three differences between cash and credit purchasing.

CASH
RM2 799

CREDIT
12 months × RM256

11 Solve the following problems.

a **Electrical Appliances Sales Centre**

Type	Price of a washing machine with a dryer
A	RM4 123
B	RM5 278

A total of 23 type A and 18 type B washing machines with dryers were sold within 6 months. Based on the table,:

i calculate the total sales of type A washing machines with dryers.

ii what is the difference in total sales of both types of washing machines?

b My brother's monthly salary is RM1 820.80. He took an education loan of RM27 984. He has to pay via instalments for 8 years.

i How much is my brother's instalment each month?

ii Does the balance of my brother's salary exceed RM1 500 after paying for the instalment? Show the calculation.

c Puan Wong bought a car as shown in the picture via credit with 108 months of instalments. She has paid RM12 835.77 as the down payment. How much does Puan Wong need to pay monthly?

RM127 531.77

d Encik Mesut has saved RM250 each month for 3 years. He wants to buy a motorcycle as shown in the picture for his son by cash. Does Encik Mesut have sufficient money? Prove it.

Cash
RM9 800

Solve all questions. Fill in the letter that represents the answer according to the question number given to crack the secret code.

QUESTIONS

1. RM19 638 + RM201 736 = ____
2. RM240 720 – RM188 601 = ____
3. (RM482 154.80 + RM309 218.70) ÷ 25 = ____
4. RM182 905 + 6 × RM24 312.90 = ____
5. RM294 152.70 + RM196 485.45 + RM407 298 = ____
6. RM500 200 – RM231 664.20 – RM156 993.80 = ____
7. RM832 002 ÷ 6 = ____
8. 17 × (RM56 978.10 – RM7 325.45) = ____
9. 9 × RM45 827 = ____
10. RM623 975.20 – RM98 370 ÷ 12 = ____

LETTER THAT REPRESENTS THE ANSWER

G	R	Y	S	I
RM221 374	RM328 782.40	RM412 443	RM615 777.70	RM111 542

N	H	E	T	U
RM31 654.94	RM52 119	RM844 095.05	RM138 667	RM897 936.15

SECRET CODE

5	3	6	7	9

6	10

10	7	4	8	3	1	7	2

3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.2.1

SELF-TEST

A Choose the correct answer.

1 "Nine hundred fifteen thousand two hundred and eight" in numerals is
A 915 820 B 915 280
C 915 028 D 915 208

2 Partition 670 453.
A 600 000 + 7 000 + 400 + 50 + 3
B 600 000 + 70 000 + 400 + 50 + 3
C 600 000 + 7 000 + 4 000 + 50 + 3
D 600 000 + 70 000 + 4 000 + 50 + 3

3 Which of the following becomes 5 hundred thousand when rounded off to the nearest hundred thousand?
A 408 996 B 534 580
C 449 673 D 560 235

4 Which of the following number is a prime number?
A 27 B 31 C 45 D 77

5 207 180 + 35 970 = ☐
A 233 150 B 234 150
C 242 150 D 243 150

6 708 102 – 45 992 = ☐
A 662 110 B 663 110
C 664 110 D 666 110

7 801 695 – 1 098 – 30 987 = ☐
A 768 610 B 769 610
C 770 708 D 800 597

8 65 × 8 032 = ☐
A 522 008 B 522 080
C 522 800 D 522 880

9 214 053 ÷ 7 = ☐
A 3 579 B 3 589
C 30 579 D 30 589

10 120 ÷ k = 20. Calculate the value of k.
A 3 B 6 C 7 D 8

11 The following are numbers arranged in ascending order.

129 358, w, 129 460, 129 683

What is the possible value of w?
A 128 905 B 129 352
C 129 456 D 129 600

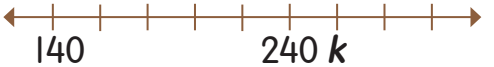
12 2 091 + 8 × 9 = ☐
A 2 163 B 2 172
C 18 791 D 18 891

13 18 × (247 + 67) = ☐
A 3 240 B 4 513
C 4 446 D 5 652

14 (280 + 15) × (28 + 12) = ☐
A 8 850 B 9 850
C 11 400 D 11 800

15 $2\frac{3}{5} \times 325$ = ☐
A 128 B 23 C 845 D 1 428

16 Convert $4\frac{1}{5}$ to percentage.
A 415% B 420%
C 435% D 440%

17 

Based on the number line, find the value of 30% of k.
A 78 B 75 C 72 D 70

18 103 534 ÷ 47 = ☐
A 2 202 remainder 40
B 222 remainder 40
C 2 200 remainder 36
D 220 remainder 36

19 $p \times 25 = 2\,275$. Calculate the value of p.

A 19 B 27 C 81 D 91

20 Which of the following is true?

A $402 \times 100 = 402\,000$

B $105 \times 10 = 10\,500$

C $71\,200 \div 100 = 712$

D $8\,150 \div 10 = 81\,500$

21 Round off 25.082 to two decimal places.

A 25.00 B 25.08 C 25.09 D 25.10

22 75% = ☐

A $\frac{3}{4}$ B $\frac{1}{2}$ C $\frac{1}{4}$ D $\frac{1}{8}$

23 $\frac{3}{10} \times \frac{2}{5} =$ ☐

A $\frac{1}{25}$ B $\frac{2}{25}$ C $\frac{3}{25}$ D $\frac{4}{25}$

24 $1\frac{3}{8} \times 240 =$ ☐

A 300 B 315 C 330 D 350

25 $48.2 + 5.092 - 17.96 =$ ☐

A 35.232 B 35.322
C 35.332 D 35.343

26 $79 \times 2.08 =$ ☐

A 16.332 B 16.432
C 163.32 D 164.32

27 0.9 km ÷ 4 = ☐ km

A 0.225 B 0.325 C 2.25 D 3.25

28 RM540 108.50 + RM67 875.30 = ☐

A RM607 938.80 B RM607 982.80
C RM607 981.80 D RM607 983.80

29 125% of RM420 is

A RM500 B RM525
C RM600 D RM630

30 RM4 500 + 6 × RM240.50 = ☐

A RM5 833 B RM5 843
C RM5 933 D RM5 943

31 25% of 480 sweets are strawberry-flavoured. Calculate the number of strawberry-flavoured sweets.

A 100 B 120 C 140 D 160

32 The picture shows the number of beads in a jar.

$\frac{5}{6}$ of the beads are blue and the rest are green. What is the number of green beads in the jar?

A 150 B 200 C 700 D 750

33 Jena had $5\frac{3}{4}$ m fabric. She used $\frac{1}{3}$ of the fabric to make a tablecloth. What is the length, in m, of fabric used to make the tablecloth?

A $5\frac{5}{12}$ m B $3\frac{5}{6}$ m

C $2\frac{1}{4}$ m D $1\frac{11}{12}$ m

34 A basket contains 340 oranges. 60% of the oranges are rotten. Calculate the number of oranges that are not rotten.

A 136 B 204 C 216 D 240

35 Rashidah needs 2.096 m of ribbon to tie a present. What is the length of ribbon needed to tie 50 presents of the same type?

A 10.48 m B 10.58 m
C 104.8 m D 105.8 m

B Answer the following questions.

1 State the answer based on the number card below.

407 153

a What is the place value of digit 4?

b Round off the number to the nearest hundred thousand.

c Calculate the difference between digit value 4 and digit value 7.

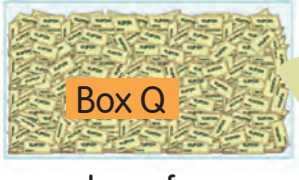
2 The table below shows favourite television programmes of a group of pupils.

Programme	Number of pupils
Cartoon	609 140
Fantasy	24 861 less than cartoon

a Calculate the number of pupils whose favourite programme is fantasy.

b $\frac{1}{5}$ of the total pupils whose favourite programme is cartoon are girls. What is the number of boys whose favourite programme is cartoon?

3 The picture below shows the number of Canteen Day coupons in box Q.



The number of coupons in another box which is box R is 130% of the number in box Q.

a Calculate the number of coupons in box R.

b After a few days, $\frac{2}{3}$ of the number of coupons in box Q were sold. What is the number of coupons still available in box Q?

4 a Solve these.

i RM125 600 – 6 × RM5 000 = ____

ii RM800 000 – (RM120 000 ÷ 8) = ____

b The picture shows the price of a refrigerator. The price of the washing machine is not shown. The total price of a refrigerator and 3 washing machines is RM16 560.

Tick (✓) the number sentence that shows the price of a washing machine.

(RM16 560 + RM6 060) ÷ 3 = RM7 540 ☐

RM16 560 – RM6 060 ÷ 3 = RM14 540 ☐

(RM16 560 – RM6 060) ÷ 3 = RM3 500 ☐

5 a Explain briefly the meaning of savings and investment.

b What is the difference between simple interest and compound interest?

c What is the meaning of credit and debt?

6 The table shows the percentages of population based on race in a city. The percentage of the Malay population is not shown.

Race	Percentage (%)
Malay	
Chinese	18
Indian	15
Others	7

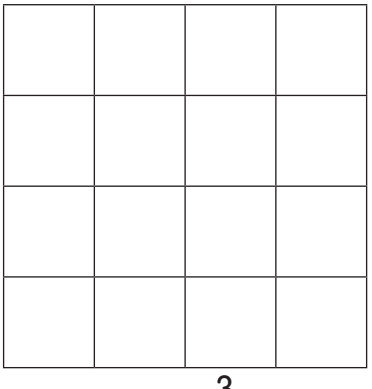
The total population in the city is 250 000 people.

a Calculate the percentage of the Malay population.

b Calculate the number of the Indian population.

c 25% of the other race population is the Iban. What is the number of the Iban population in the city?

7 The diagram shows 16 squares of the same size.



a Rekha shaded $\frac{3}{8}$ of the diagram above. How many squares were shaded by Rekha?

b Jagreet coloured 4 squares in red on the diagram above. What percentage of the whole diagram does the red squares represent?

8 The mass of a *Pandan* cake is $1\frac{4}{5}$ kg. Caslie served $\frac{1}{3}$ of the *Pandan* cake to the guests. What is the mass, in kg, of the *Pandan* cake left?

9 **a** Romi bought $8\frac{1}{5}$ kg of jackfruit. He gave $\frac{1}{4}$ of the jackfruit to his neighbour. What is the mass, in kg, of the jackfruit given to his neighbour?

b The length of a fabric is 0.75 m. Puan Zuraidah cut the fabric into 3 equal parts of the same length. What is the length of each part of the fabric?

10 The following are the prices of three types of houses in three different residential areas.

Taman Kenari	Taman Selasih	Taman Ceria
		
RM380 000	RM218 500	RM102 600

a A factory owner bought one unit of the house in Taman Kenari, one unit of the house in Taman Selasih, and one unit of the house in Taman Ceria for the workers. Calculate the total price for the three units of houses.

b Encik Hassan and 4 of his younger brothers shared money equally to buy one unit of the house in Taman Selasih. What amount of money must be given by each of his brothers?

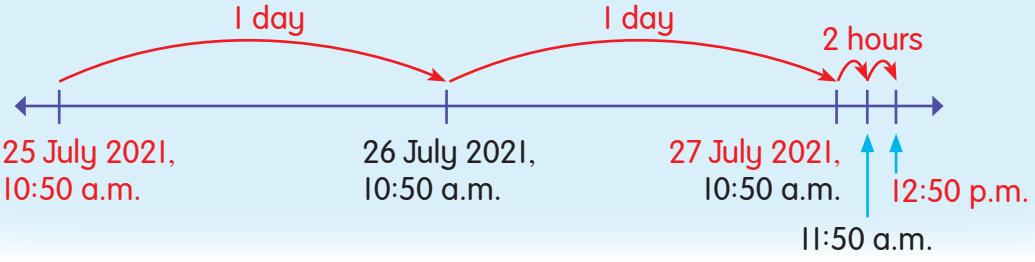
4 TIME

DURATION

Days and hours

State the duration of the study tour from the situation above.

START: 25 July 2021, 10:50 a.m. to END: 27 July 2021, 12:50 p.m.



The duration of the study tour is **2 days 2 hours**.

TEACHER'S NOTES

4.1.1(i)

- Ask pupils to talk about their experiences about tours, camping, or other activities involving days and hours.

Months and days

1

Calculate the duration, in days, of the flower planting programme.

1 February 2020 to 8 March 2020 = ☐ days

1 February to 29 February → 29 days
1 March to 8 March → + 8 days
Total days → 37 days

1 February 2020 to 8 March 2020 = **37** days

The duration of the flower planting programme is **37 days**.

In **leap year**, **February** has **29 days**. The total days in the leap year will be **366 days** and it will only occur **once every 4 years**.

MIND TRIGGER

- January, March, May, July, August, October, and December has 31 days each.
- April, June, September, and November has 30 days each.
- February (regular year) has 28 days.
- February (leap year) has 29 days.

What is the duration, in days, if the same campaign was held on the same date in 2019?

TEACHER'S NOTES

4.1.1 (ii)

- Carry out simulation activities using calendars, timelines, and diagrams to calculate the duration in days.
- Discuss how to determine the leap year by dividing the year by 4 without remainder. For example, 2020 ÷ 4 = 505.

2 What is the duration, in days, of the online shopping promotion as shown?

29 May 2020 to 5 July 2020 = ____ days

Method 1

29 May to 31 May → 3 days
1 June to 30 June → 30 days
1 July to 5 July → + 5 days
Total days → 38 days

Method 2

29 May to 31 May = 31 days – 29 days + 1 day
= 3 days

Need to add additional 1 day as 29 May is considered as 1 day.

The number of days in June = 30 days

1 July to 5 July = 5 days – 1 day + 1 day
= 5 days

Need to add additional 1 day as 1 July is considered as 1 day.

Total days: 3 days + 30 days + 5 days = 38 days

29 May 2020 to 5 July 2020 = **38** days

The duration of the online shopping promotion is **38 days**.

If the promotion is extended to 16 August, calculate the duration, in days, of the promotion held.

The duration of 62 days is from day 1 of ____ to day 31 of ____.
Fill in the correct month in the ____ above.

4.1.1 (ii)

- Guide pupils to find the duration of days using various methods. Ask a variety of questions to reinforce their understanding.

Years, months, and days

Calculate the duration, in days, of the project of upgrading the sports complex based on the information on the left.

1 December 2019 to 19 January 2021 = ____ days

1.12.2019 to 31.12.2019 = 31 days
1.1.2020 to 31.12.2020 = 366 days
1.1.2021 to 19.1.2021 =(19 – 1 + 1) days
= 19 days
Total days: 31 days + 366 days + 19 days
= 416 days

1 December 2019 to 19 January 2021 = **416** days

The duration of the project of upgrading the sports complex is **416 days**.

Try to calculate the duration, in days, from 13 June 2021 to 20 April 2023.

TRY THESE

1 Calculate the following duration. State the answers in days and hours.
- (a) 9:20 a.m., Saturday to 11:20 a.m., Sunday.
- (b) 1650 hours, Monday to 0550 hours, Friday.

2 What is the following duration in days?
- (a) 2 January 2018 to 13 January 2018.
- (b) 14 February 2020 to 6 April 2020.
- (c) 9 October 2019 to 5 February 2020.

3 Based on the table, calculate the duration, in days, for the:
- (a) first phase project.
- (b) second phase project.

Shophouses Construction Project

Project	Starting date	Completion date
First phase	22.10.2018	17.1.2020
Second phase	25.2.2021	3.2.2023

CONVERT UNITS OF TIME

Hours to minutes

1

Convert $\frac{1}{2}$ hour to minutes.

$\frac{1}{2}$ hour = ☐ minutes

$\frac{1}{2}$ hour = $(\frac{1}{\cancel{2}_{1}} \times \cancel{60}^{30})$ minutes

= 30 minutes

$\frac{1}{2}$ hour = **30** minutes

$\frac{1}{2}$ hour is **30 minutes**.

Duration for break time is $\frac{1}{3}$ hour.
State this in minutes.

TIPS

1 hour = 60 minutes

hour(s) $\xrightarrow{\times 60}$ minute(s)

2 $1\frac{3}{4}$ hours = ☐ minutes

$1\frac{3}{4}$ hours = $(1\frac{3}{4} \times 60)$ minutes

= $(\frac{7}{\cancel{4}_{1}} \times \cancel{60}^{15})$ minutes

= 105 minutes

$1\frac{3}{4}$ hours = **105** minutes

BRAIN TEASER

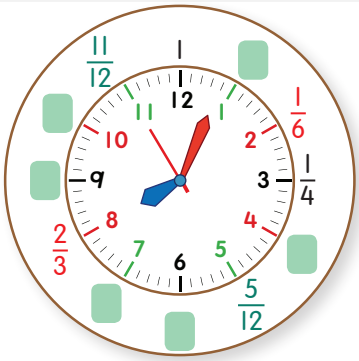
The minute hand moves from 12 to 1.

☐ hour = ☐ minutes

SMART TRAIL

FRACTION CLOCK

1. Complete the label of fractions on the clock face.
2. Paste the fraction clock in your book.
3. Write three conversion of units of hours involving fractions.
   For example: $\frac{1}{4}$ hour = ☐ minutes



TEACHER'S NOTES

4.2.1(i)

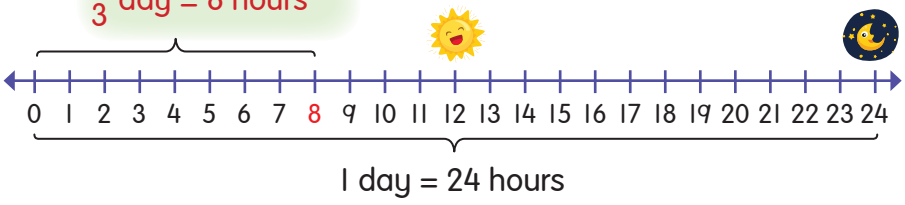
- Guide pupils to convert units of time based on their experiences in their daily lives.
- Provide an adequate clock face for all pupils for the "Smart Trail" activity.

Days to hours

1 **a** Convert $\frac{1}{3}$ day to hours.

$\frac{1}{3}$ day = ☐ hours

$\frac{1}{3}$ day = 8 hours



1 day = 24 hours

$\frac{1}{3}$ day = $(\frac{1}{\cancel{3}_{1}} \times \cancel{24}^{8})$ hours

= 8 hours

$\frac{1}{3}$ day = **8** hours

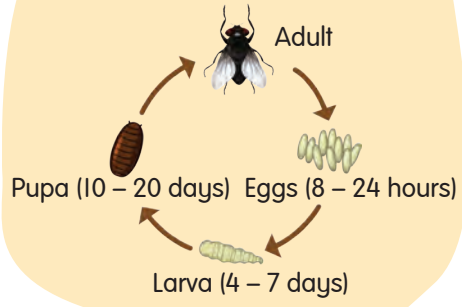
$\frac{1}{3}$ day is **8 hours**.

1 day = 24 hours

day(s) $\xrightarrow{\times 24}$ hour(s)

The duration for eggs of a housefly to grow into larvae is $\frac{1}{3}$ day to 1 day.

LIFE CYCLE OF A HOUSEFLY



b

If the larva takes $5\frac{1}{8}$ days to grow into a pupa, state the duration in hours.

$5\frac{1}{8}$ days = ☐ hours

$5\frac{1}{8}$ days = $(\frac{41}{\cancel{8}_{1}} \times \cancel{24}^{3})$ hours

= 123 hours

$5\frac{1}{8}$ days = **123** hours

Recall!

$5\overset{+1}{\underset{\times 8}{}}\frac{1}{8} = \frac{5 \times 8 + 1}{8}$

$= \frac{41}{8}$

Calculate $16\frac{1}{4}$ days in hours, which is the duration of a pupa to grow into a housefly.

TEACHER'S NOTES

4.2.1 (ii)

- Help pupils find information about time on the Internet. For example, a quality sleep duration for children aged between 6 – 12 years is $\frac{5}{12}$ day and adults is $\frac{1}{3}$ day.
- Surf https://rb.gy/s3xc3t

Years to months

1 The picture on the right shows the age of an oil painting.

Convert $9\frac{1}{6}$ years to months.

$9\frac{1}{6}$ years = ☐ months

$9\frac{1}{6}$ years = (9 × 12) months + $(\frac{1}{\cancel{6}_{1}} \times \cancel{12}^{2})$ months

= 108 months + 2 months

= 110 months

$9\frac{1}{6}$ years = **110** months

$9\frac{1}{6}$ years is **110 months**.

2 $12\frac{2}{3}$ years = ☐ months

$12\frac{2}{3}$ years = $(\frac{38}{\cancel{3}_{1}} \times \cancel{12}^{4})$ months

= 152 months

$12\frac{2}{3}$ years = **152** months

$$\begin{array}{r} {}^{3}38 \\ \times\ \ 4 \\ \hline 152 \end{array}$$

TIPS

1 year = 12 months

year(s) $\xrightarrow{\times 12}$ month(s)

3

$5\frac{1}{2}$ years = ☐ months

AQILAH

$5\frac{1}{2}$ years = $(5\frac{1}{\cancel{2}_{1}} \times \cancel{12}^{6})$ months

= (6 × 6) months

= 36 months

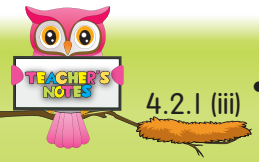
PETER

$5\frac{1}{2}$ years = $(5\frac{1}{2} \times 12)$ months

= $(\frac{11}{\cancel{2}_{1}} \times \cancel{12}^{6})$ months

= 66 months

Who calculated the correct answer? Why?



4.2.1 (iii)

- Ask pupils to make a family tree based on age using fractions of years. Then, convert them to months.

Decades to years

1

MIND TRIGGER

Taman Sahabat Kuching, Sarawak was built in 2005.

It will be $1\frac{1}{2}$ decades old in 2020.

Convert $1\frac{1}{2}$ decades to years.

$1\frac{1}{2}$ decades = ☐ years

$1\frac{1}{2}$ decades = $(\frac{3}{\cancel{2}_{1}} \times \cancel{10}^{5})$ years

= 15 years

$1\frac{1}{2}$ decades = **15** years

$1\frac{1}{2}$ decades is **15 years**.

2

MIND TRIGGER

Sepilok Orangutan Rehabilitation Centre was built in 1964.

It will be $5\frac{3}{5}$ decades old in 2020.

$5\frac{3}{5}$ decades = ☐ years

$5\frac{3}{5}$ decades = (5 × 10) years + $(\frac{3}{\cancel{5}_{1}} \times \cancel{10}^{2})$ years

= 50 years + 6 years

= 56 years

$5\frac{3}{5}$ decades = **56** years

TIPS

1 decade = 10 years

decade(s) $\xrightarrow{\times 10}$ year(s)

BRAIN TEASER

Fill in the blanks with 1 and 10. Both numbers can be used more than once.

$\frac{\square\square}{\square\square}$ decade = ☐ year

TEACHER'S NOTES

4.2.1 (iv)

- Guide pupils to convert units using various methods.
- Instil moral values such as love for the country.
- Surf https://rb.gy/rywt0s

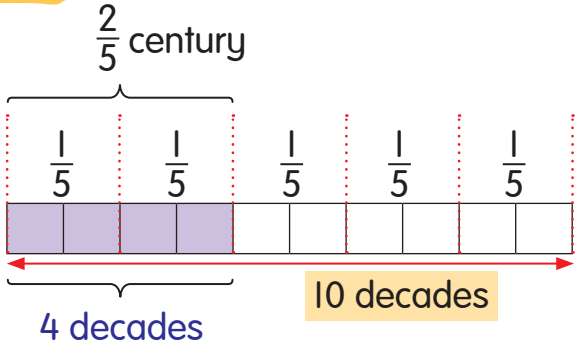
Centuries to decades

1

Convert $\frac{2}{5}$ century to decades.

$\frac{2}{5}$ century = ☐ decades

Method 1



$\frac{2}{5}$ century = **4** decades

$\frac{2}{5}$ century is **4 decades**.

Method 2

$\frac{2}{5}$ century = $(\frac{2}{\cancel{5}_{1}} \times \cancel{10}^{2})$ decades

= 4 decades

TIPS

1 century = 10 decades

century(ies) $\xrightarrow{\times 10}$ decade(s)

2 $3\frac{7}{10}$ centuries = ☐ decades

$3\frac{7}{10}$ centuries = $(\frac{37}{\cancel{10}} \times \cancel{10})$ decades

= 37 decades

$3\frac{7}{10}$ centuries = **37** decades

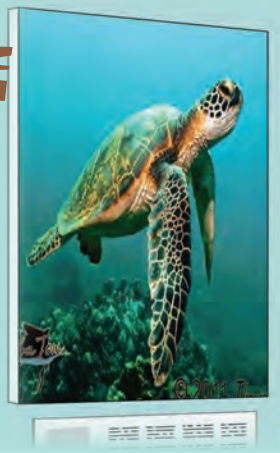
TEACHER'S NOTES

4.2.1 (v)

- Ask pupils to talk about antique items that are more than 10 years or $\frac{1}{10}$ century old for the activity of converting the units of time to decades.

Centuries to years

1



Wow, the lifespan of a turtle can reach $\frac{9}{10}$ century!

Convert $\frac{9}{10}$ century to years.

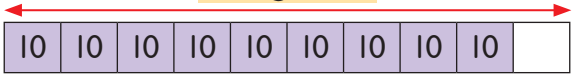
$\frac{9}{10}$ century = ☐ years

1 century = 100 years

century(ies) $\xrightarrow{\times 100}$ year(s)

Method 1

100 years



90 years

$\frac{9}{10}$ century = **90** years

Method 2

$\frac{9}{10}$ century = $(\frac{9}{10} \times 100)$ years

= 90 years

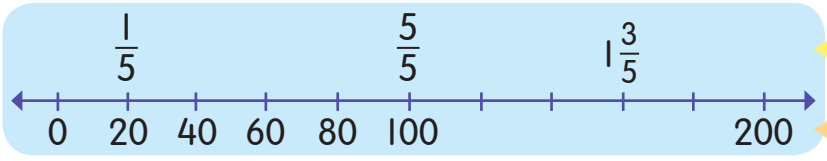
$\frac{9}{10}$ century is **90 years**.

2 Calculate the estimated lifespan of a Malayan tiger, in years.

The lifespan of a Malayan Tiger is about $\frac{1}{5}$ century.

$\frac{1}{5}$ century = $(\frac{☐}{☐} \times 100)$ years

= ☐ years



The estimated lifespan of a Malayan Tiger is about ☐ years.

Using the number line, state $1\frac{3}{5}$ centuries in years.

TEACHER'S NOTES

4.2.1 (vi)

- Discuss endangered animals and instil values such as how to save endangered animals.

TRY THESE

1 Convert hours to minutes.

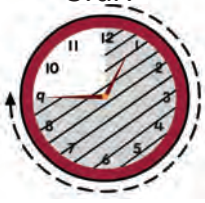
(a) $\frac{5}{6}$ hour (b) $\frac{1}{5}$ hour (c) $8\frac{1}{2}$ hours

2 The diagram below shows the movement of the minutes hand. Complete these.

(a) Start

(b) Start

(c) Start



$\frac{\square}{\square}$ hour = ☐ minutes $\frac{\square}{\square}$ hour = ☐ minutes $\frac{\square}{\square}$ hour = ☐ minutes

3 Calculate and state the answers in hours.

(a) $\frac{1}{4}$ day = ☐ (b) $2\frac{1}{2}$ days = ☐ (c) $6\frac{3}{8}$ days = ☐

4 Calculate.

(a) $\frac{2}{3}$ year = ☐ months (b) $1\frac{3}{4}$ years = ☐ months

5 Complete these.

(a) $\frac{1}{2}$ decade = ☐ years (b) $2\frac{4}{5}$ decades = ☐ years

(c) $\frac{9}{10}$ century = ☐ decades (d) $8\frac{1}{5}$ centuries = ☐ decades

(e) $6\frac{1}{4}$ centuries = ☐ years (f) $32\frac{1}{10}$ centuries = ☐ years

6 Fill in the blanks.

(a) ☐ minutes as ☐ hours as ☐ months

$\frac{1}{4}$ hour $9\frac{2}{3}$ days $10\frac{1}{2}$ years

(b) ☐ year as ☐ decades as ☐ years

$\frac{1}{10}$ decade $7\frac{3}{5}$ centuries $13\frac{4}{5}$ centuries

CONVERT UNITS OF TIME AGAIN

Hours to minutes

GOTONG-ROYONG PROGRAMME TAMAN SEJAHTERA

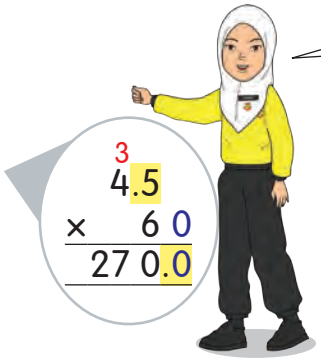
The *gotong-royong* programme shown was conducted in 4.5 hours. State the duration of the programme in minutes.

4.5 hours = ☐ minutes

Method 1

4.5 hours = (4.5 × 60) minutes

= 270 minutes



Method 2

4.5 hours = 4 hours + 0.5 hour

= (4 × 60) minutes + ($\frac{5}{\cancel{10}}$ × $6\cancel{0}$) minutes

= 240 minutes + 30 minutes

= 270 minutes

4.5 hours = **270** minutes

- Multiply like multiplying whole numbers.
- Make sure the decimal point is placed in the correct position.

The duration of the *gotong-royong* programme is **270 minutes**.

Before the programme started, a briefing was conducted for 0.35 hour. How many minutes was the briefing? Discuss.

TEACHER'S NOTES

4.2.2 (i)

- Ask pupils to talk about the activities that they have done and the duration in decimal units of hours.
- Guide pupils to convert decimal units of hours to minutes.
- Instil moral values like cooperation, helping each other, the spirit of neighbourhood, and cleanliness.