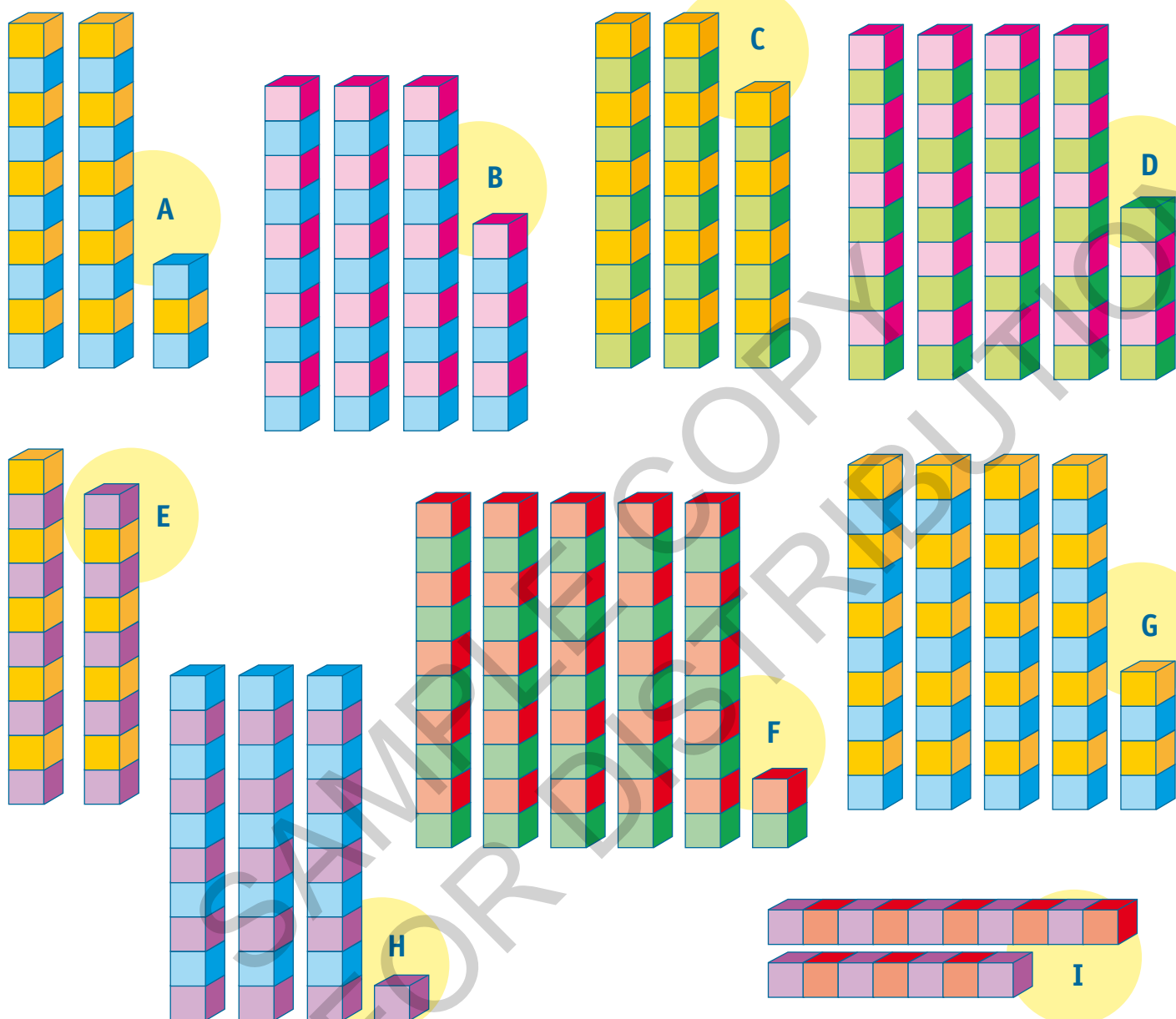




Each complete tower has 10 cubes. **A** has 23 cubes. 2 complete towers and $\frac{3}{10}$. $2\frac{3}{10}$ or 2.3

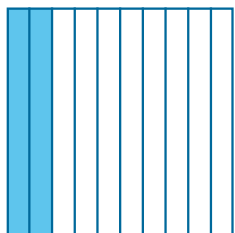
1 Write each group as a fraction and a decimal.

Group	Fraction	Decimal
B		
C		
D		
E		

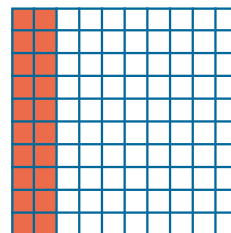
Group	Fraction	Decimal
F		
G		
H		
I		

2 How many cubes are needed to build each group?

A _____ **B** _____ **C** _____ **D** _____ **E** _____ **F** _____ **G** _____ **H** _____ **I** _____



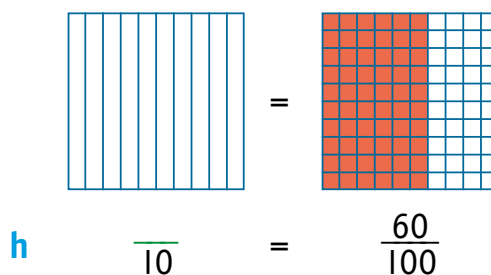
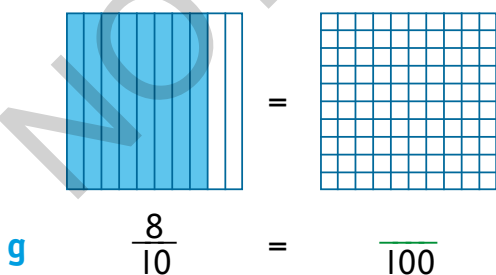
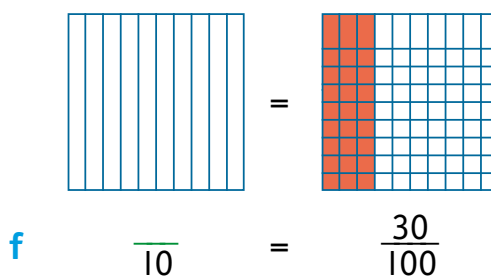
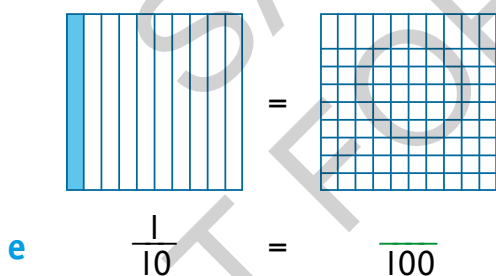
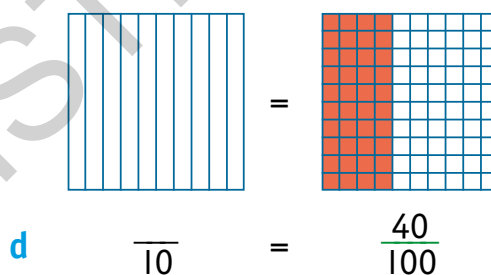
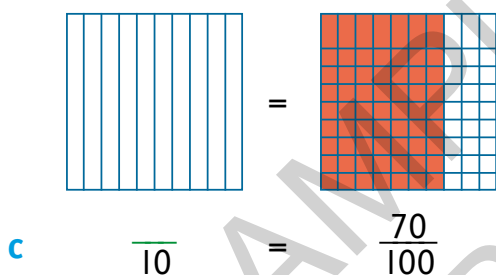
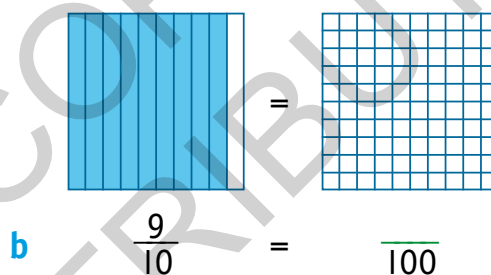
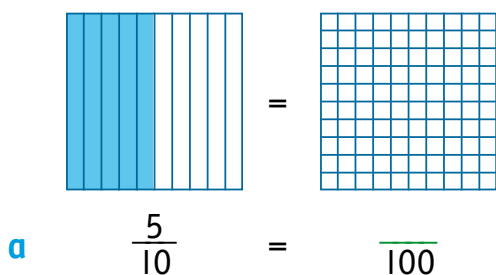
$$\frac{2}{10} = \frac{20}{100}$$



This square is cut into tenths.
 $\frac{2}{10}$ is coloured blue.

This square is cut into hundredths.
 $\frac{20}{100}$ is coloured red.

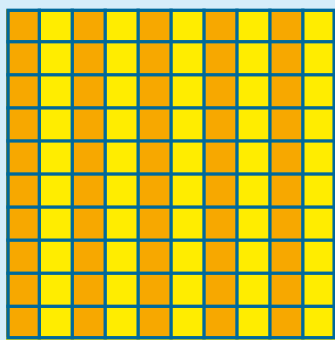
1 Complete the fractions.



2 Complete the pattern. $\frac{1}{10} = \frac{\quad}{100}$ $\frac{2}{10} = \frac{\quad}{100}$ $\frac{3}{10} = \frac{\quad}{100}$ $\frac{4}{10} = \frac{\quad}{100}$

Tenths on a hundred grid

TERM 1
Week 1



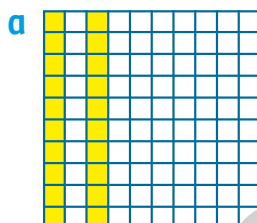
$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$

$$\frac{10}{10} = 1 \text{ whole} \quad \frac{100}{100} = 1 \text{ whole}$$

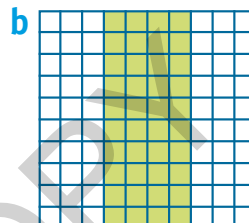
Place values

Ones		Tenths	Hundredths
3	.	5	7
1	.	8	

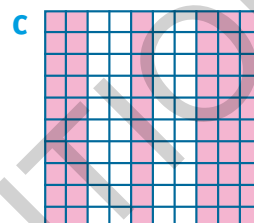
1 How many tenths are coloured? Write the decimal.



$$\frac{20}{10} = 0. \underline{\hspace{1cm}}$$



$$\frac{30}{10} = 0. \underline{\hspace{1cm}}$$



$$\frac{40}{10} = 0. \underline{\hspace{1cm}}$$

2 In question 1, how many hundredths?

a

$$\frac{\hspace{1cm}}{100} = 0. \underline{\hspace{1cm}}$$

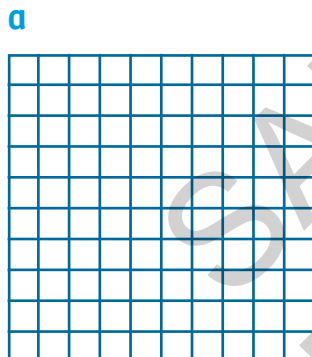
b

$$\frac{\hspace{1cm}}{100} = 0. \underline{\hspace{1cm}}$$

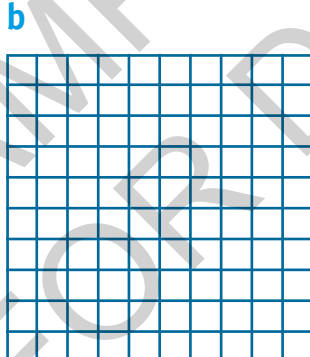
c

$$\frac{\hspace{1cm}}{100} = 0. \underline{\hspace{1cm}}$$

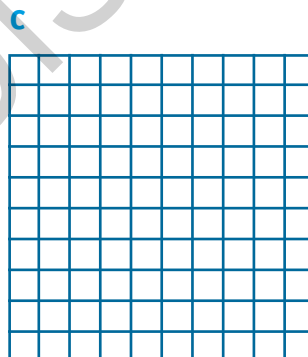
3 Colour to show tenths.



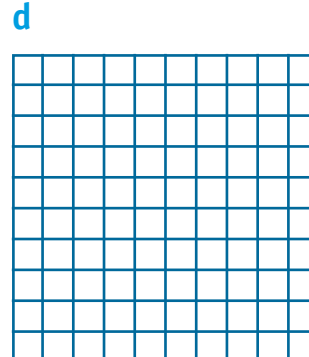
$$0.1, \frac{1}{10}$$



$$0.8$$



$$\frac{3}{10}$$



$$0.9$$

4 Write these on the number line. 0.6 0.1 0.8 0.5



Challenge!

A calculator is showing these dollar amounts.
Write them using a \$ sign.

a 3.4

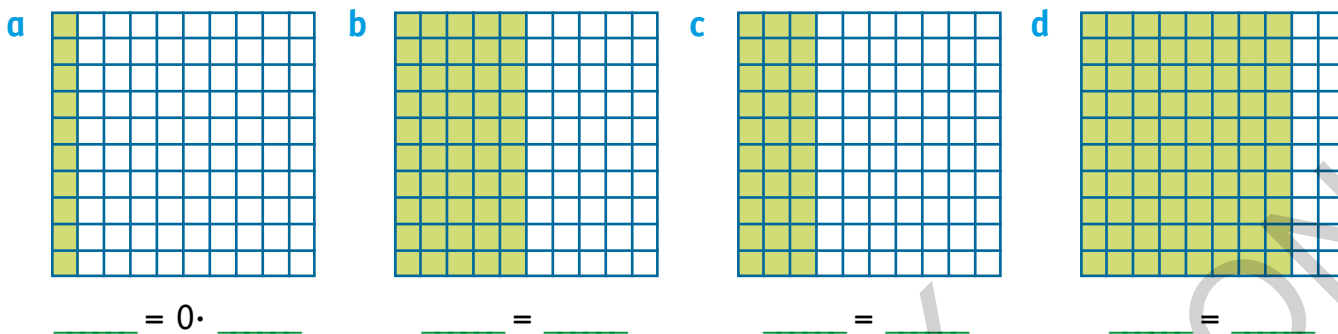
b 1.8

c 2.9

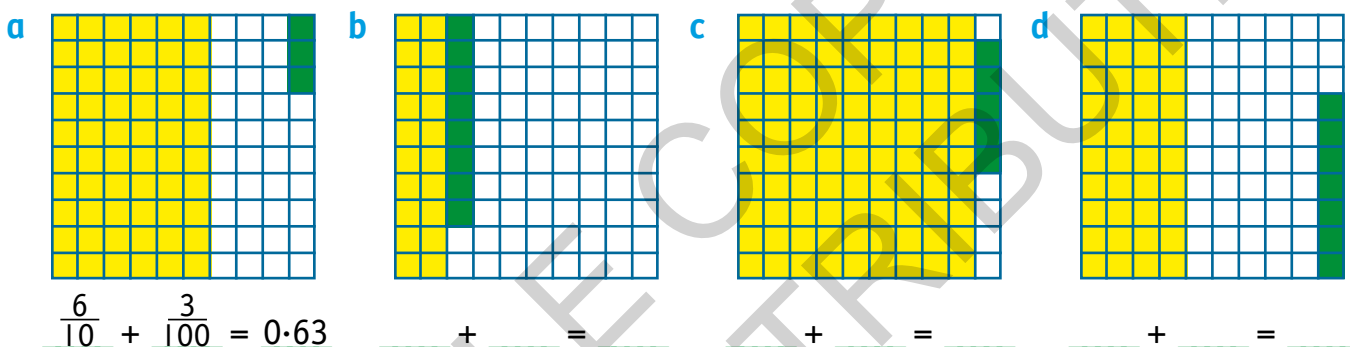
d 14.5



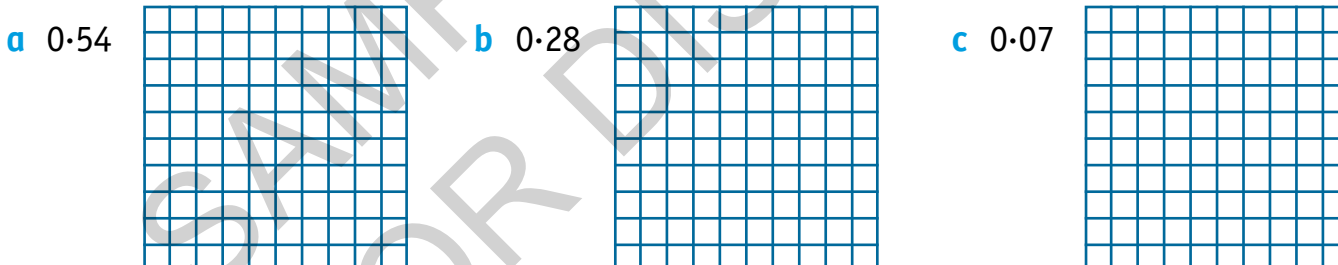
1 Write the tenths and the decimal.



2 Write the tenths and the hundredths and the decimal.



3 Colour the tenths and the hundredths separately to show:



4 Circle the number in the tenths place.

a 0.47 b 1.35 c 7.99 d 13.58

5 Underline the number in the hundredths place.

a 2.57 b 9.05 c 24.74 d 19.32

6 Write these decimals from largest to smallest. 0.18 0.61 0.09 0.35 0.23 0.59

7 Write these decimals on the number line. 0.47 0.67 0.7 0.25 0.97 0.5



8 Write these decimals on the number line. 1.2 1.78 1.53 1.95 1.31 1.64



1 Use $<$, $>$, $=$ to make these statements true.

- a 0.3 _____ 0.7 b 0.6 _____ 0.60
 c 0.5 _____ 0.6 d 0.6 _____ 0.2
 e 0.9 _____ 0.5 f 0.3 _____ 0.30

2 Write the decimal.

- a $\frac{1}{10}$ _____ b $\frac{7}{10}$ _____ c $\frac{3}{10}$ _____
 d $\frac{9}{10}$ _____ e $\frac{4}{10}$ _____ f $\frac{2}{10}$ _____

3 Write as tenths and hundredths.

- a $0.5 = \frac{\quad}{10} = \frac{\quad}{100}$ b $0.8 = \frac{\quad}{10} = \frac{\quad}{100}$ c $0.6 = \frac{\quad}{10} = \frac{\quad}{100}$
 d $0.1 = \frac{\quad}{10} = \frac{\quad}{100}$ e $0.7 = \frac{\quad}{10} = \frac{\quad}{100}$ f $0.4 = \frac{\quad}{10} = \frac{\quad}{100}$
 g $0.2 = \frac{\quad}{10} = \frac{\quad}{100}$ h $0.9 = \frac{\quad}{10} = \frac{\quad}{100}$ i $0.3 = \frac{\quad}{10} = \frac{\quad}{100}$

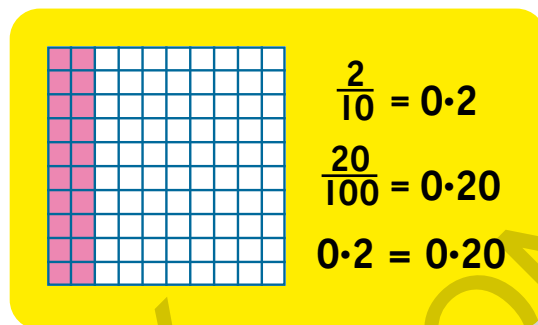
4 Tick the correct statements and cross the incorrect statements.

- a $1.6 = 1.60$ _____ b $0.9 > 0.29$ _____ c $3.2 = 2.80$ _____
 d $5.34 < 5.5$ _____ e $2.70 = 2.7$ _____ f $4.18 < 4.3$ _____
 g $0.9 > 1.1$ _____ h $7.10 = 7.01$ _____ i $9.3 < 9.25$ _____

- 5 a
$$\begin{array}{r} 0.10 \\ + 2.50 \\ \hline \end{array}$$
 b
$$\begin{array}{r} 3.40 \\ + 2.30 \\ \hline \end{array}$$
 c
$$\begin{array}{r} 1.15 \\ + 2.25 \\ \hline \end{array}$$
 d
$$\begin{array}{r} 3.25 \\ + 4.25 \\ \hline \end{array}$$

6 Now use a calculator to work out question 5.
Write what the calculator shows.

- a _____ b _____ c _____ d _____
 e What is missing? _____
 f Why? _____



Mastery Checklist

- I can: ☐ write fractions and decimals
☐ make connections between fractions and decimals
☐ order and compare decimals
☐ add decimals

1,324,765

One million, three hundred and twenty-four thousand, seven hundred and sixty-five

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
1	3	2	4	7	6	5

$$1,000,000 + 300,000 + 20,000 + 4,000 + 700 + 60 + 5$$

1 Read these numbers and write them in words.

a 467,803

b 84,260

c 9,374,018

2 Read these numbers and write them in numbers.

a three hundred and forty-five thousand, two hundred and fifteen

b eighty-nine thousand, six hundred and seven

c seven million, one hundred and fifty-five thousand, nine hundred and thirty-eight

3 Which digit is in the:

7,938,261

a tens place? _____

b tens of thousands place? _____

c thousands place? _____

d hundreds of thousands place? _____

e hundreds place? _____

f millions place? _____

4 What is the value of the:

4,857,032

a ones? _____

b millions? _____

c hundreds? _____

d tens of thousands? _____

e thousands? _____

f tens? _____

g hundreds of thousands? _____

Compare and order numbers

TERM 1
Week 2

1 Compare these numbers using $<$, $>$ or $=$.

- a 789,455 87,945 b 187,450 287,945 c 6,792 50,792
d 392,075 392,071 e 78,329 78,429 f 270,419 271,038
g 132,315 132,315 h 4,373,256 4,373 i 890,375 890,315

- 2 a Highlight the smallest number of animals in this chart.
b Circle the animal with the largest population.
c Write the numbers in order from smallest to largest.

Animal populations	
Fantail	2 million
Kiwi	70 thousand
New Zealand Fur seal	12 thousand
Kakapo	250

Population of Small Countries

Dominica 71,625 	San Marino 33,931 	Monaco 39,242 	Montserrat 4,992 
--	--	--	---

- 3 a Circle the smallest number. b How do you know it is the smallest?
c Put these populations in order from smallest to largest.

- 4 a Circle the highest amount in sales.
b Highlight the period when sales were lowest.
c What was the total in sales for this year?
d Write the numbers in order from lowest to highest.

Period	Sales
Jan-Mar	\$214,983
Apr-Jun	\$320,491
Jul-Sep	\$234,849
Oct-Dec	\$127,845

Challenge!

Put all the numbers from questions 2-4 in order from largest to smallest.



1 Write in te reo Māori.

- | | | |
|-----------|-----------|-----------|
| a 7 _____ | b 9 _____ | c 3 _____ |
| d 5 _____ | e 8 _____ | f 6 _____ |
| g 2 _____ | h 4 _____ | i 0 _____ |

2 Write in te reo Māori words.

one	ten	one	hundred	one	thousand
one	ten	thousand	one	hundred	thousand

3 Write in te reo Māori words.

- | | |
|----------------|-----------------|
| a 80,000 _____ | b 600,000 _____ |
| c 70,000 _____ | d 300,000 _____ |
| e 20,000 _____ | f 900,000 _____ |

4 Write the number.

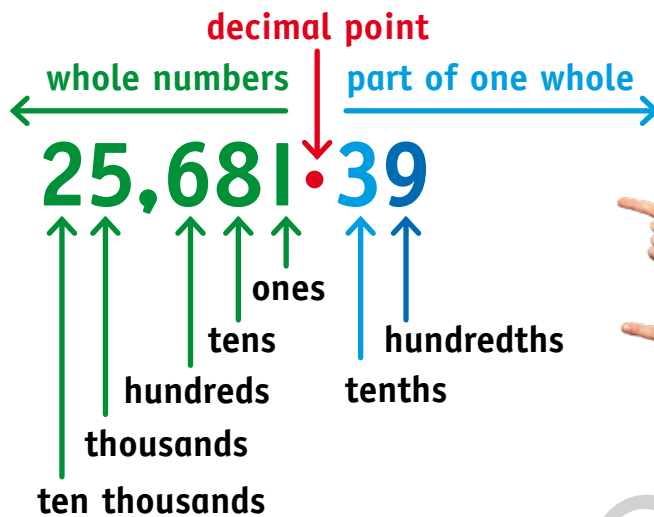
- a whitu rau, toru tekau mā tahi _____
- b whā mano, ono rau iwa tekau mā rima _____
- c waru tekau mā toru mano, kotahi rau rima tekau mā iwa _____
- d rua rau whitu tekau mā toru mano, kotahi rau waru tekau mā rua _____

5 Write in te reo Māori words.

- a 715,462 _____
- b 389,514 _____
- c 628,379 _____

6 Compare these numbers using <, > or =.

- a rima rau toru tekau mā whitu rima rau rua tekau mā tahi
- b rua mano, kotahi rau ono tekau mā iwa rua tekau mano, toru rau mā rima
- c whā rau mā waru mano, waru rau mā rima toru rau mā ono tekau mano, whā tekau



1 Complete the table.

Number	Ten thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths
a 38,241.26	3	8	2	4	1	.	2	6
b 34,710.32								
c 1,987.20								
d 8,394.03								
e 643.37								
f 765.2								
g 10.26								
h 35.96								
i 9.76								
j 0.32								
k 0.09								

2 Write true or false.

- a 7.40 has 40 hundredths. _____ b 246.90 has 246 hundredths. _____
- c 32,495.72 has 72 hundredths. _____ d 5,493.80 has 8 hundredths. _____
- e 9.32 has 9 ones. _____ f 7.49 has 9 tenths. _____

Compare and order decimals

TERM 1
Week 2

1 Number the decimals in ascending order, from 1 (smallest) to 5 (largest).

- a 32.14 32.35 32.86 32.09 32.1
- b 957.49 957.32 957.09 957.59 957.00
- c 1,493.36 1,493.02 1,493.67 1,493.15 1,493.5

2 Write $<$, $>$, $=$ to compare these decimals.

- a 249.35 < 249.53 b 2,123.52 _____ 2,123.25
- c 354.73 _____ 354.37 d 535.97 _____ 535.79
- e 3,746.8 _____ 3,746.08 f 977.32 _____ 977.23
- g 0.68 _____ 0.86 h 289.24 _____ 289.42

3 Write a smaller decimal.

- a 642.38 642.37 b 25,924.1 _____
- c 36,541.63 _____ d 653.73 _____
- e 846.03 _____ f 92,543.12 _____
- g 84,903.1 _____ h 7,382.15 _____

4 Write a larger decimal.

- a 642.38 642.39 b 25,924.1 _____
- c 36,541.63 _____ d 653.73 _____
- e 846.03 _____ f 92,543.12 _____
- g 84,903.1 _____ h 7,382.15 _____

5 Write a decimal that is in between.

- a 8.43 8.54 8.75 b 2.49 _____ 2.83
- c 16.37 _____ 16.38 d 3,295.12 _____ 3,295.26

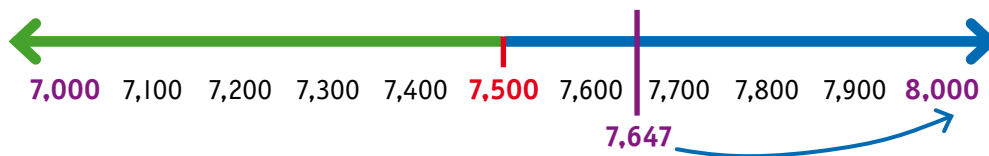
6 Complete the patterns.

- a 14.25, 14.35, 14.45, _____, _____, _____
- b 8.72, 8.62, 8.52, _____, _____, _____
- c 3.18, 3.28, _____, 3.48, _____, _____

Mastery Checklist

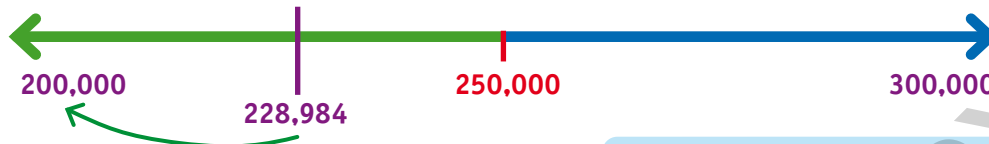
- I can: ☐ read, write, represent, compare and order whole and decimal numbers
☐ recognise place value up to millions and down to hundredths
☐ read, write and compare numbers up to hundred thousands in te reo Māori

Round 7,647 to the nearest 1,000.



Rounding
1, 2, 3, 4 round down
←
Midpoint is 5
5, 6, 7, 8, 9 round up
→

Round 228,984 to the nearest 100,000.



To round a number to a **specific place value**, look at the **next place down**.

Round to the

nearest 10 **176,294** → **176,290**

nearest 100 **176,294** → **176,300**

nearest 1,000 **176,294** → **176,000**

nearest 10,000 **176,294** → **180,000**

nearest 100,000 **176,294** → **200,000**

1 Round to the nearest ten.

a 74 _____

b 81 _____

c 25 _____

d 96 _____

e 123 _____

f 3,168 _____

2 Round to the nearest hundred.

a 654 _____

b 463 _____

c 971 _____

d 202 _____

e 1,018 _____

f 4,961 _____

3 Round to the nearest thousand.

a 7,398 _____

b 5,650 _____

c 1,427 _____

d 1,901 _____

e 53,006 _____

f 98,433 _____

4 Round to the nearest ten thousand.

a 54,621 _____

b 26,835 _____

c 93,582 _____

d 75,247 _____

e 341,782 _____

f 877,839 _____

5 Round to the nearest hundred thousand.

a 419,320 _____

b 125,278 _____

c 365,483 _____

d 856,112 _____

e 598,163 _____

f 602,184 _____

Challenge!

What are my numbers?

They round down to 10.

They round up to 700.

They round down to 5,000.

They round up to 80,000.

They round down to 200,000.

How many answers can you find?

1 Estimate the answer before working.

a $58 + 64$

b $37 + 99$

c $72 + 63$

d $85 + 38$

Estimate	Answer

e $124 + 132$

f $268 + 311$

g $406 + 192$

h $385 + 297$

Estimate	Answer

2 Estimate answers first.

- a In the treasure chest there were 183 rubies and 378 diamonds. How many jewels altogether?

Est.

Ans.



- b Jock wrote 252 words on one page and 169 on the next. How long was his story?

Est.

Ans.



- c Megan poured 95 mL of orange juice into a glass and then 289 mL of lemonade. How much was in the glass?

Est.

Ans.



- d Write a problem for the answer.

Est.

Ans.

3 Write a story problem for these number sentences using the theme of **Pirates**. Estimate your answers by rounding numbers appropriately.

a $345 + 627 =$

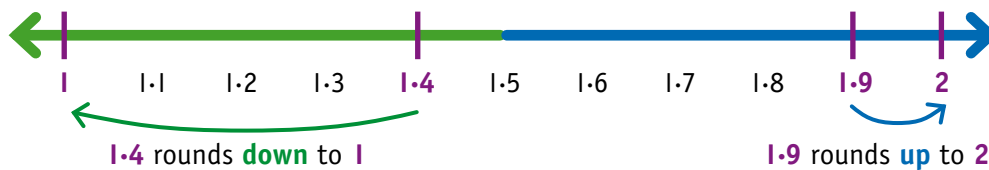
b $258 + 429 =$

Challenge! Write three four-digit numbers. Estimate their total. Add them using a calculator. Were you close?

Rounding tenths

TERM 1
Week 3

Round tenths to the nearest whole number.



Rounding
1, 2, 3, 4 round down
5, 6, 7, 8, 9 round up



1 Place these numbers on the number line.

a 0.8 b 2.1 c 4.7 d 1.3 e 3.4 f 2.6 g 0.5 h 4.2 i 3.9 j 1.8

2 Round to the nearest whole number.

a _____ b _____ c _____ d _____ e _____
f _____ g _____ h _____ i _____ j _____

3 Round to the nearest whole number.

a 7.4 _____ b 10.1 _____ c 8.6 _____ d 0.8 _____ e 9.2 _____
f 15.5 _____ g 6.7 _____ h 20.9 _____ i 5.3 _____ j 16.5 _____

4 Bill rounded these decimals to the nearest whole number. Tick the correct answers. Correct the ones that are wrong.

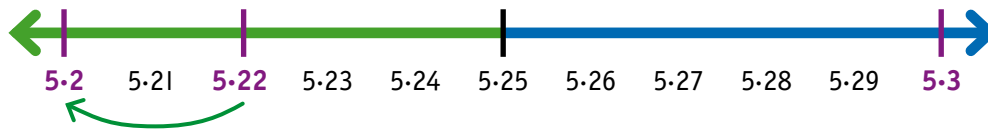
Number	Bill's answer	Your answer	Number	Bill's answer	Your answer
a 17.4	17		e 15.9	16	
b 4.2	5		f 25.7	26	
c 7.1	7		g 8.5	8	
d 16.3	17		h 19.6	19	

5 Write 5 numbers that would round to 6.

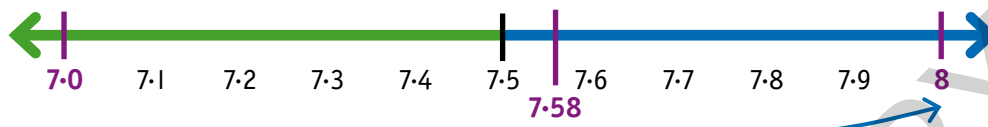
6 Write a story problem for these number sentences using the theme of **Music**. Estimate your answers by rounding numbers appropriately.

a $\$56.25 + \$28.80 =$ _____ b $\$99.20 + \$4.65 =$ _____

Round 5.22 to the nearest tenth.



Round 7.58 to the nearest whole number.



Rounding to a specific place value?

Round to the nearest **tenth**, look at the **hundredths digit**.

5.22 → **5.2**

Round to the nearest **whole** number, look at the **tenths digit**.

7.58 → **8**

1

A	B	C	D	E	F
\$11.59	\$15.38	\$9.71	\$19.16	\$24.39	\$16.90

Write the price of each mask to the nearest dollar.

A _____ **B** _____ **C** _____ **D** _____ **E** _____ **F** _____

2 Round the same prices to the nearest 10 cents.

A _____ **B** _____ **C** _____ **D** _____ **E** _____ **F** _____

3 Maia had to round these decimals to the nearest whole number. Tick the ones she has correct and write the correct answers for the ones she has wrong.

Number	Maia's answer	Your answer	Number	Maia's answer	Your answer
a 5.43	5		e 7.84	8	
b 23.09	24		f 2.35	3	
c 5.28	6		g 18.51	18	
d 10.72	11		h 12.64	12	

4 Write 5 numbers that would round to 2.1.

--	--	--	--	--

Challenge! Write a story problem for $\$113.65 + \$84.79 + \$231.82$.
Estimate then use a calculator to find the answer.

Multiply

×10

Move each digit **one place to the left**
(each digit becomes 10 times larger).

$$5 \times 10 = 50$$

×100

Move each digit **two places to the left**
(each digit becomes 100 times larger).

$$5 \times 100 = 500$$

Divide

÷10

Move each digit **one place to the right**
(each digit becomes 10 times smaller).

$$5 \div 10 = 0.5$$

÷100

Move each digit **two places to the right**
(each digit becomes 100 times smaller).

$$5 \div 100 = 0.05$$

1 Multiply.

	×	×10	×100
a	4		
b	9		
c	10		
d	3		
e	12		

2 Divide.

	÷	÷10	÷100
a	7		
b	19		
c	6		
d	14		
e	2		

3 Complete the pattern.

a $4 \times 10 =$ _____

$40 \times 10 =$ _____

$400 \times 10 =$ _____

b $600 \div 10 =$ _____

$60 \div 10 =$ _____

$6 \div 10 =$ _____

c $800 \div 10 =$ _____

$80 \div 10 =$ _____

$8 \div 10 =$ _____

4 Find the missing number.

a $\square \times 10 = 70$

b $\square \times 100 = 500$

c $80 \div \square = 8$

d $300 \div \square = 3$

5 Explain. How does multiplying by 10 differ from multiplying by 100?

Mastery Checklist

- I can: ☐ round numbers to any place
☐ round decimals to tenths and whole numbers
☐ use rounding to estimate the answers to calculations
☐ use place value to multiply and divide by 10 and 100

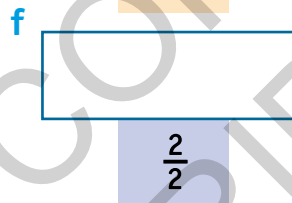
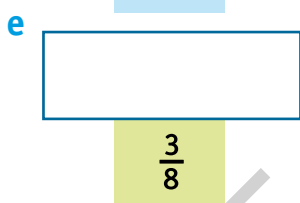
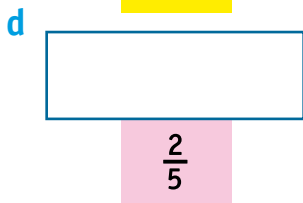
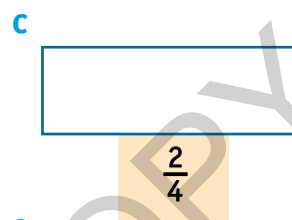
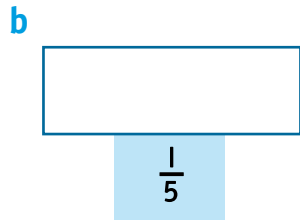
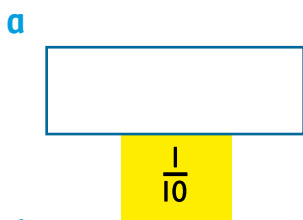


- 1 How many:
 - a dogs? _____
 - b cats? _____
 - c sheep? _____
 - d animals? _____
- 2 How many is $\frac{1}{4}$ of the:
 - a dogs? _____
 - b cats? _____
 - c sheep? _____
 - d animals? _____
- 3 Of which animal group can we find:
 - a an eighth? _____
 - b a quarter? _____
 - c a sixth? _____
- 4 What fraction of the dogs is:
 - a 6 dogs? _____
 - b 4 dogs? _____
 - c 3 dogs? _____
- 5 What fraction of the total number of animals is:
 - a the dogs? _____
 - b the cats? _____
 - c the sheep? _____
- 6 Moana says, 'One sixth is always smaller than one quarter.'
Do you agree? Explain using the animals on this page _____

1 What fraction is coloured?



2 Divide, then colour the fraction.



2 ← numerator
3 ← denominator

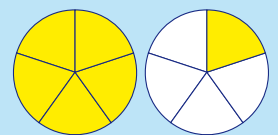
The **denominator** tells us how many parts altogether.
The **numerator** tells us how many parts we have.

3 Divide, then colour the fraction.

a $1\frac{1}{4}$	b $2\frac{1}{4}$	c $1\frac{3}{4}$
d $3\frac{1}{2}$	e $1\frac{1}{2}$	f $4\frac{1}{2}$
g $5\frac{3}{4}$	h $3\frac{2}{4}$	i $4\frac{1}{4}$

Mixed number

A whole number with a fraction.



This shows 1 whole and 1 fifth.

$1\frac{1}{5}$

Improper fraction

The wholes are added to the numerator.

$$\frac{5}{5} + \frac{1}{5} = \frac{6}{5}$$

4 Write the mixed numbers from question 3 as improper fractions.

a

 b

 c

 d

 e

 f

 g

 h

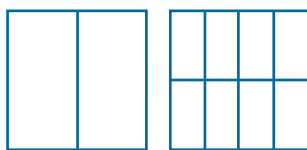
 i

1 Colour to show these fractions are equal.

a $\frac{1}{2} = \frac{2}{4}$



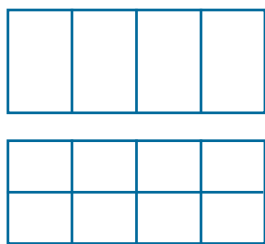
b $\frac{1}{2} = \frac{4}{8}$



Some fractions have different names but are the same size.



c $\frac{3}{4} = \frac{6}{8}$



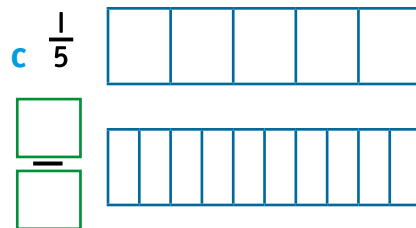
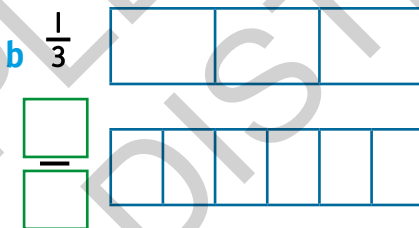
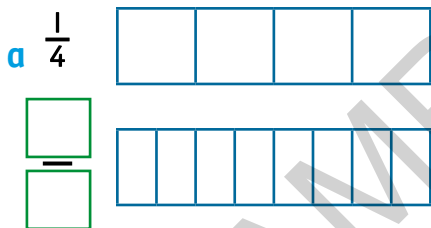
d $\frac{4}{5} = \frac{8}{10}$



e $\frac{2}{3} = \frac{4}{6}$

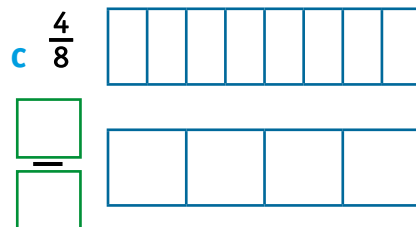
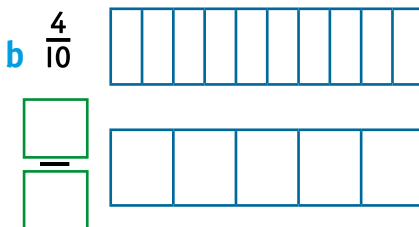
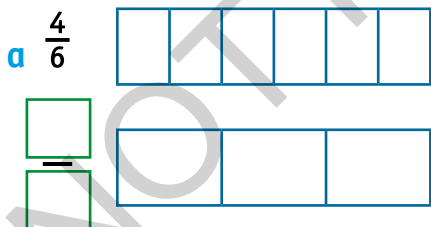


2 Colour the fraction. Colour and write an equivalent fraction below.



d Look at the numerators and denominators. Complete this statement:
Double the denominator, _____ the numerator.

3 Colour the fraction. Colour and write an equivalent fraction below.



d Look at the numerators and denominators. Complete this statement:
Halve the denominator, _____ the numerator.

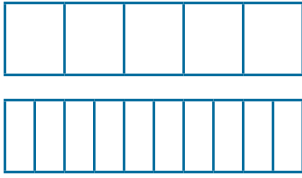
Challenge! Write as many fractions as you can that are equivalent to a half.

Compare with diagrams

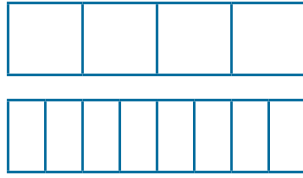
TERM 1
Week 4

1 Colour the fractions to compare using $<$, $>$ or $=$.

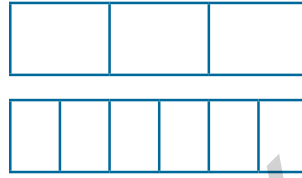
a $\frac{1}{5}$ $\frac{3}{10}$



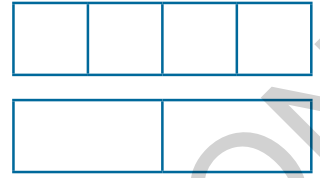
b $\frac{3}{4}$ $\frac{6}{8}$



c $\frac{2}{3}$ $\frac{3}{6}$



d $\frac{1}{2}$ $\frac{3}{4}$



2 Draw fraction diagrams to compare using $<$, $>$ or $=$.

a $\frac{2}{4}$ $\frac{4}{8}$

b $\frac{3}{5}$ $\frac{7}{10}$

c $\frac{1}{2}$ $\frac{3}{8}$

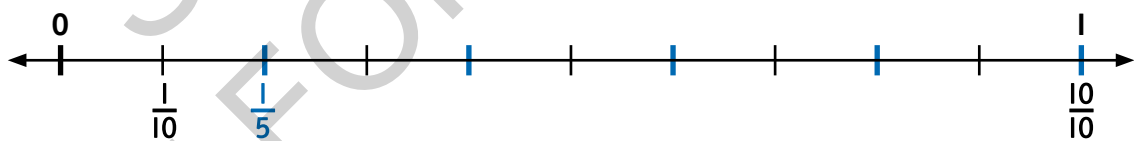
d $\frac{1}{3}$ $\frac{3}{6}$

3 Plot the fractions on the number lines to compare using $<$, $>$ or $=$.

a $\frac{2}{5}$ $\frac{4}{10}$

b $\frac{1}{2}$ $\frac{3}{5}$

c $\frac{1}{2}$ $\frac{6}{10}$

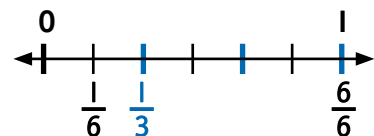
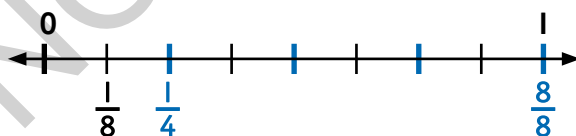


d $\frac{3}{4}$ $\frac{5}{8}$

e $\frac{1}{2}$ $\frac{2}{4}$

f $\frac{2}{3}$ $\frac{5}{6}$

g $\frac{1}{2}$ $\frac{4}{6}$



Mastery Checklist

- I can: ☐ identify and represent fractions, mixed numbers and improper fractions
☐ identify equivalent fractions using diagrams
☐ compare fractions using diagrams and number lines

Fractions

- 1 Five children compare how much of their chocolate bar they have left.

Johnno: $\frac{5}{8}$ Ari: $\frac{4}{5}$ Lily: $\frac{1}{2}$ Noah: $\frac{7}{10}$ Kaia: $\frac{3}{4}$

Noah says he has the most left. Is he correct? _____

Colour the fractions.

Who has the most chocolate left? _____

Who has the least? _____



- 2 Kauri, Ana and Oliver each have some of a set of collector cards.

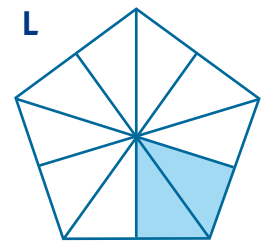
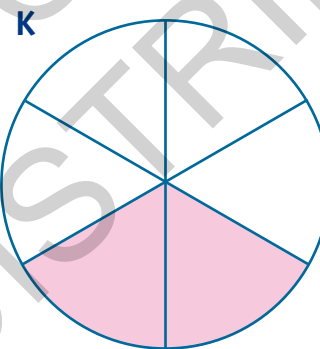
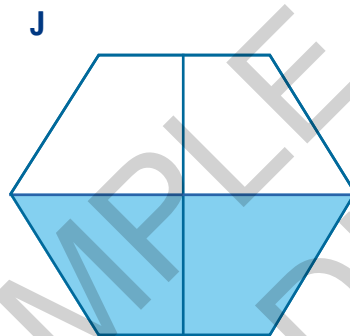
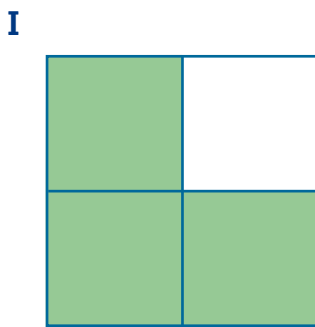
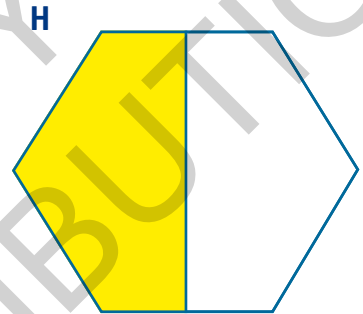
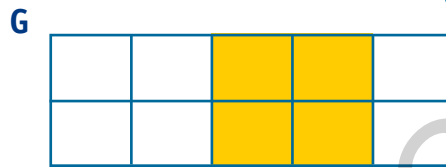
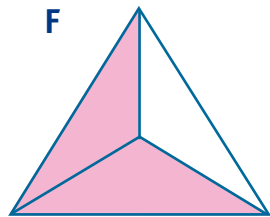
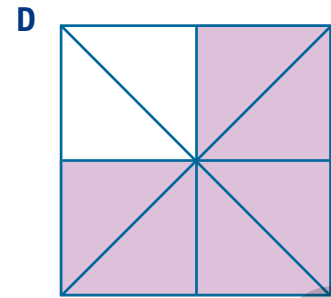
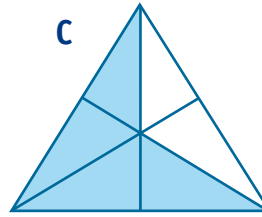
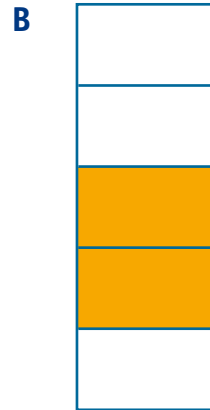
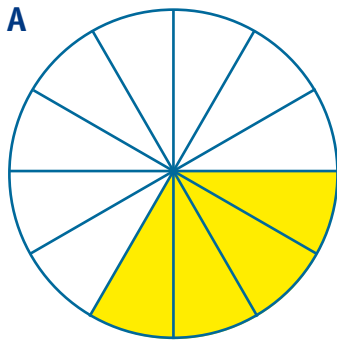
Kauri has $\frac{1}{2}$, Ana has $\frac{2}{3}$, and Oliver has $\frac{5}{6}$ of a set.

Can someone give Kauri some cards so they all have the same amount? Hint: use sixths.

How many cards could there be in the whole pack?

I can solve problems by:

- ☐ understanding fractions ☐ drawing diagrams



1 What fraction is coloured?

A _____ **B** _____ **C** _____ **D** _____ **E** _____ **F** _____
G _____ **H** _____ **I** _____ **J** _____ **K** _____ **L** _____

2 Name fractions that are the same size.

a **A** = _____ **b** **B** = _____ **c** **C** = _____ **d** **D** = _____ **e** **E** = _____ **f** **H** = _____

3 Name the equivalent fractions.

a $\frac{4}{12} =$ _____ **b** _____ **c** _____ **d** _____ **e** _____ **f** _____

4 **a** Look carefully at the equivalent fractions.

b For each pair of equivalent fractions, what pattern can you see?

- ☐ ☐ The numerator and denominator are both multiplied, or divided, by the same number.
- ☐ ☐ Only the numerator changes.
- ☐ ☐ Only the denominator changes.

5 Write four fractions that are equivalent to $\frac{1}{2}$. _____

Making equivalent fractions

TERM 1
Week 5

- 1 Make equivalent fractions for each diagram on page 22 by multiplying the numerator and the denominator by 4.

a $\frac{4}{12} = \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$	b $\frac{2}{5} = \frac{2 \times 4}{5 \times 4} =$
c	d
e	f
g	h
j	k
	l

Remember $\frac{2}{5}$ ← numerator
← denominator

To make **equivalent fractions**

- multiply the numerator and the denominator by the same number.

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

OR

- divide the numerator and the denominator by the same number.

$$\frac{8}{12} = \frac{8 \div 4}{12 \div 4} = \frac{2}{3}$$

- 2 Divide to make the smallest equivalent fraction.

a $\frac{5}{20} = \frac{5 \div 5}{20 \div 5}$	b $\frac{6}{30} =$	c $\frac{9}{12} =$
d $\frac{15}{40} =$	e $\frac{8}{28} =$	f $\frac{20}{90} =$

- 3 Circle the equivalent fractions.

a $\frac{2}{3}, \frac{3}{6}, \frac{4}{6}$

b $\frac{6}{12}, \frac{5}{8}, \frac{1}{2}$

c $\frac{2}{5}, \frac{6}{15}, \frac{4}{12}$

d $\frac{1}{4}, \frac{1}{8}, \frac{2}{16}$

e $\frac{3}{9}, \frac{1}{3}, \frac{6}{12}$

f $\frac{7}{8}, \frac{10}{12}, \frac{5}{6}$

g $\frac{10}{20}, \frac{6}{10}, \frac{3}{5}$

h $\frac{2}{4}, \frac{3}{6}, \frac{4}{8}$

- 4 Write the equivalent fractions.

a $\frac{15}{20} = \frac{3}{\square}$

b $\frac{24}{32} = \frac{\square}{4}$

c $\frac{27}{30} = \frac{\square}{10}$

d $\frac{28}{36} = \frac{7}{\square}$

e $\frac{21}{56} = \frac{3}{\square}$

f $\frac{90}{100} = \frac{\square}{10}$

g $\frac{16}{18} = \frac{8}{\square}$

h $\frac{20}{50} = \frac{10}{\square} = \frac{\square}{5}$

Add and subtract fractions

TERM 1
Week 5

1 When the denominators are the same, add the numerators.

a $\frac{1}{6} + \frac{1}{6} =$ _____

b $\frac{1}{10} + \frac{3}{10} =$ _____

c $\frac{5}{12} + \frac{1}{12} =$ _____

d $\frac{7}{12} + \frac{3}{12} =$ _____

e $\frac{1}{8} + \frac{3}{8} =$ _____

f $\frac{1}{8} + \frac{5}{8} =$ _____

g $\frac{1}{4} + \frac{1}{4} =$ _____

h $\frac{7}{8} + \frac{1}{8} =$ _____

i $\frac{2}{12} + \frac{4}{12} =$ _____

j $\frac{3}{6} + \frac{1}{6} =$ _____

k $\frac{1}{8} + \frac{1}{8} =$ _____

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

m $\frac{7}{10} + \frac{1}{10} =$ _____

n $\frac{1}{4} + \frac{3}{4} =$ _____

o $\frac{2}{9} + \frac{4}{9} =$ _____

2 Use the diagram to add the fractions. Write the answer as an improper fraction. Then write the answer as a mixed number.

a $\frac{4}{5} + \frac{3}{5} = \frac{7}{5}$  $\frac{7}{5}$

b $\frac{3}{4} + \frac{3}{4} =$  _____

c $\frac{5}{6} + \frac{5}{6} =$  _____

d $\frac{5}{8} + \frac{5}{8} =$  _____

e $\frac{7}{10} + \frac{7}{10} =$  _____

3 The denominators are the same so subtract the numerators.

a $\frac{3}{4} - \frac{1}{4} =$ _____

b $\frac{5}{6} - \frac{1}{6} =$ _____

c $\frac{7}{8} - \frac{3}{8} =$ _____

d $\frac{9}{10} - \frac{3}{10} =$ _____

e $\frac{5}{8} - \frac{1}{8} =$ _____

f $\frac{7}{10} - \frac{3}{10} =$ _____

4 a $\frac{1}{4} - \frac{3}{4} =$  $\frac{2}{4} = \frac{1}{2}$

b $\frac{2}{5} - \frac{3}{5} =$  _____

c $\frac{1}{3} - \frac{2}{3} =$  _____

d $\frac{1}{5} - \frac{4}{5} =$  _____

e $\frac{3}{10} - \frac{7}{10} =$  _____

5 There were two chocolates on the table. Gran ate three fifths of one and I ate three fifths of the other. How much chocolate was left on the table?

Checkpoint 1

1 Which number is smallest?

Shade one bubble.

458,793

☐

8 hundred thousand

☐

one million

☐

99,999

☐

2 What is the place value of the underlined number?

168.52

hundreds

☐

tens

☐

tenths

☐

hundredths

☐

3 What is the answer?

$$15 \div 100 =$$

1.5

☐

0.015

☐

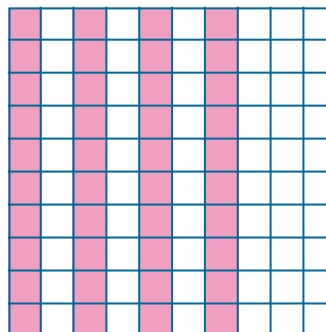
0.15

☐

1.05

☐

4 How many tenths are coloured?



2

☐

4

☐

40

☐

10

☐

Write your answer in the box.

5 Alex has 0.4, or four of his money in the bank.



Checkpoint 1

- 6 What is the price rounded to the nearest 10 cents?



• \$16.38

Shade one bubble.

\$16.00

☐

\$16.40

☐

\$16.35

☐

\$16.30

☐

7

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

$\frac{3}{6}$

☐

$\frac{7}{6}$

☐

$\frac{3}{5}$

☐

$\frac{4}{5}$

☐

- 8 Which number has the largest hundreds digit?

7,954,328

☐

3,429,845

☐

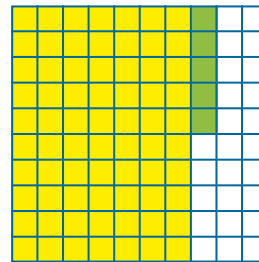
1,467,502

☐

8,047,638

☐

- 9 Which of the following shows the correct tenths + hundredths and the decimal?



$\frac{7}{10} + \frac{5}{100}, 0.75$

☐

$\frac{7}{10} + \frac{2}{100}, 0.72$

☐

$\frac{3}{10} + \frac{8}{100}, 0.38$

☐

$\frac{3}{10} + \frac{2}{100}, 0.32$

☐

- 10 Which is NOT a correct answer?

$$\frac{4}{5} - \frac{4}{10} = ?$$

$\frac{2}{5}$

☐

$\frac{4}{10}$

☐

$\frac{40}{100}$

☐

$\frac{25}{50}$

☐

Odds and evens (+ -)

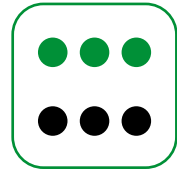
TERM 1
Week 6

Answer the sums and complete the rules.

- 1 a $9 + 9 =$ _____ b $11 + 15 =$ _____
c $13 + 7 =$ _____ d $121 + 1 =$ _____
e $5 + 217 =$ _____ f $313 + 25 =$ _____

Rule

odd + odd
= _____



- 2 a $4 + 8 =$ _____ b $10 + 12 =$ _____
c $28 + 14 =$ _____ d $18 + 118 =$ _____
e $120 + 326 =$ _____ f $622 + 442 =$ _____

Rule

even + even
= _____



- 3 a $11 + 6 =$ _____ b $14 + 3 =$ _____
c $124 + 9 =$ _____ d $31 + 16 =$ _____
e $232 + 15 =$ _____ f $315 + 114 =$ _____

Rule

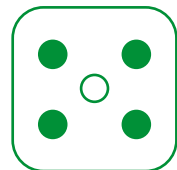
odd + even = _____
even + odd = _____



- 4 a $29 - 3 =$ _____ b $15 - 7 =$ _____
c $125 - 7 =$ _____ d $125 - 11 =$ _____
e $231 - 15 =$ _____ f $315 - 113 =$ _____

Rule

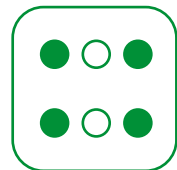
odd - odd
= _____



- 5 a $16 - 10 =$ _____ b $22 - 6 =$ _____
c $128 - 18 =$ _____ d $336 - 12 =$ _____
e $326 - 120 =$ _____ f $622 - 442 =$ _____

Rule

even - even
= _____



- 6 a $70 - 15 =$ _____ b $69 - 18 =$ _____
c $84 - 23 =$ _____ d $37 - 14 =$ _____
e $246 - 217 =$ _____ f $444 - 13 =$ _____

Rule

odd - even = _____
even - odd = _____

- 7 Use the rules to check the answers. Tick if they follow the rule.

- a $765 + 1,432 = 2,198$ b $2,040 + 738 = 2,778$
c $7,841 - 965 = 6,876$ d $765 - 548 = 216$
e $9,205 + 333 = 9,538$ f $8,960 - 4,826 = 4,133$



We can make equivalent number sentences to help solve problems.



e.g. Henri keeps 8 hens and 2 roosters. His mother has the same number of chickens, but she has 6 hens. How many roosters does she have?

Working: $8 + 2$ is the same as $6 + ?$

$8 + 2$ is 10 which is the same as $6 + 4$, so Henri's mother has 4 roosters.

1 Make three number sentences which have the same total as:

- a $4 + 7$ _____
- b $5 + 8$ _____
- c $11 + 6$ _____
- d $16 + 9$ _____
- e $18 + 6$ _____

2 Match then number sentences and write them to show equivalence.

e.g. $17 + 2 \longrightarrow 15 + 4$ $17 + 2 = 15 + 4$

- a $17 + 9$ $12 + 13$ _____
- b $23 + 6$ $18 + 8$ _____
- c $15 + 10$ $26 + 5$ _____
- d $18 + 7$ $16 + 13$ _____
- e $22 + 5$ $19 + 6$ _____
- f $19 + 12$ $16 + 11$ _____



3 Show how to use equivalent number sentences to answer the questions.

- a I saved \$15 one week and then another \$20 the next week.
Jenni saved \$13 the first week and wants to equal my savings in the next week.
How much more does she have to save?

_____ = _____

- b There are 28 boys and 12 girls in one bus on the excursion.
16 girls get into the other bus and 24 boys follow.
Do the buses have equal loads?



_____ = _____

Make a table

Annie has ten pets – some dogs and some cats.
Make a table to show the possible numbers of dogs and cats she could have.

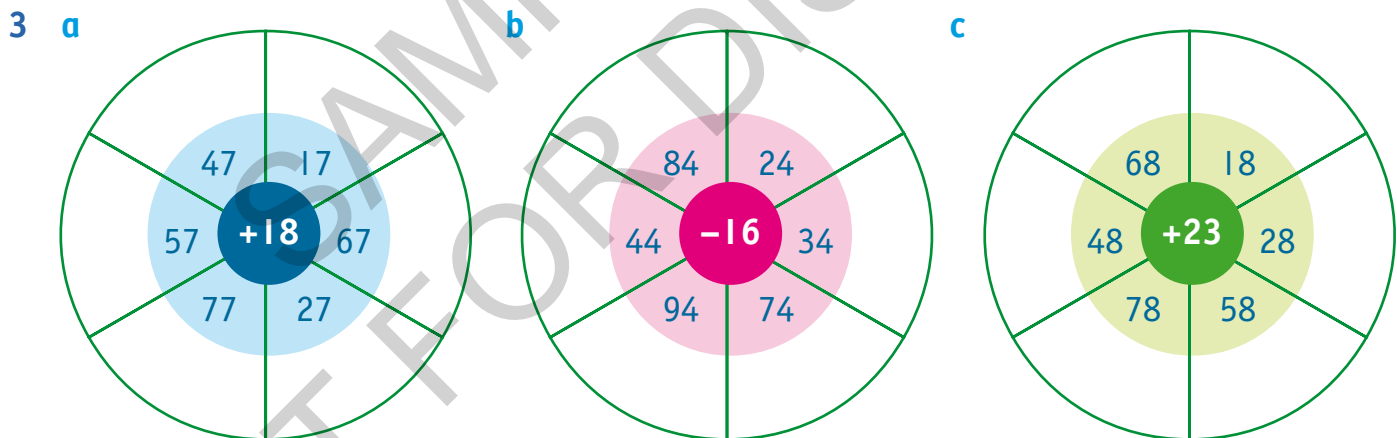
Use subtraction
to check addition

$$\begin{array}{r} 293 \\ + 578 \\ \hline 871 \end{array} \quad \begin{array}{r} 871 \\ - 293 \\ \hline 578 \end{array}$$

- 1 a $3 + 8 = 11$ b $6 + 9 = \underline{\quad}$ c $5 + 7 = \underline{\quad}$ d $4 + 8 = \underline{\quad}$
 $30 + 80 = \underline{\quad}$ $60 + 90 = \underline{\quad}$ $50 + 70 = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$
 $300 + 800 = \underline{\quad}$ $600 + 900 = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$
- e $7 - 4 = \underline{\quad}$ f $9 - 5 = \underline{\quad}$ g $8 - 6 = \underline{\quad}$ h $8 - 1 = \underline{\quad}$
 $70 - 40 = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
 $700 - 400 = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$

2 From one fact write three more.

- a $13 + 9 = 22$ b $16 + 7 = \underline{\quad}$ c $28 - 9 = \underline{\quad}$
 $9 + \underline{\quad} = 22$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
 $22 - \underline{\quad} = 13$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$
 $22 - \underline{\quad} = 9$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$

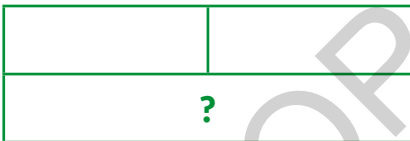
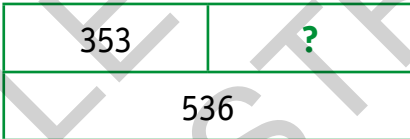
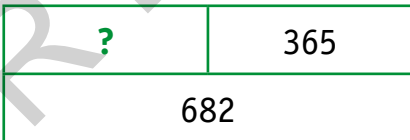
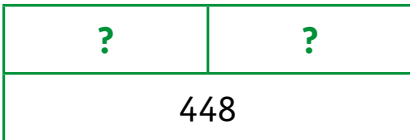


4 Add, then subtract to check your answers.

- a $\begin{array}{r} 372 \\ + 211 \\ \hline \end{array}$ b $\begin{array}{r} 569 \\ + 358 \\ \hline \end{array}$
 $\underline{\quad}$ $\underline{\quad}$
 $\underline{\quad}$ $\underline{\quad}$
- c $\begin{array}{r} 779 \\ + 355 \\ \hline \end{array}$ d $\begin{array}{r} 699 \\ + 386 \\ \hline \end{array}$
 $\underline{\quad}$ $\underline{\quad}$
 $\underline{\quad}$ $\underline{\quad}$

Always check
your answers.



Problem	Bar model	Equation
1 Waru and his cousins carved hei-tiki. Waru carved 35, Yarran carved 29 and Coen carved 39. How many did they carve altogether?	 $? = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
2 Ash counted 187 lizards in the rock garden and 168 more beside the creek. How many lizards altogether?	 $? = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
3 Aaina counted 353 fruit on Saturday, and then on Sunday she counted some more. If Aaina counted 536 fruit altogether, how many did she count on Sunday?	 $? = \underline{\hspace{2cm}}$	$353 + \underline{\hspace{2cm}} = 536$ $536 - 353 = \underline{\hspace{2cm}}$
4 Nullah and Bindi collected 682 wattle seeds. If Bindi collected 365, how many did Nullah collect?	 $? = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$ $\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$
5 Jiemba and Birrani were at the beach counting crabs. They each counted the same number and got 448 in total. How many did they each count?	 $? = \underline{\hspace{2cm}} \quad ? = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 448$

Mastery Checklist

- I can: ☐ check answers using the odd/even rules for addition and subtraction
☐ write equivalent equations and use them to solve problems
☐ use addition and subtraction as inverse operations
☐ add and subtract 1, 2 and 3-digit numbers

Think of a number

- 1 Find the pattern in this procedure so that you can make up a similar puzzle.

Try three different numbers.

a

b

c

Write down a number < 30

Add 15

Subtract 8

Add another 9

Take away 19 this time

Add 6

Subtract 3

That's your number!

Your number is

Your number is

Your number is

- d What happens to make this answer?

CARD TRICK

- 2 Try this.

Work it out here

Ask a partner to choose a number card from a deck of cards. Instruct them to:

Add 12 to the value of the card

Subtract 8

Add a further 10

Take 16 from the total

Add 5

Subtract 4

Ask what their result is. Secretly add 1 and tell them the number of their card!

- a Work out how you could tell their card was 1 more than their answer.

- b Make up a similar puzzle of your own, using addition and subtraction.

I can solve problems by:

☐ using different operations ☐ finding patterns



382



128



467



175



319



246

A games shop owner counted all the items in the shop.

1 Which item was there: **a** most of? _____ **b** least of? _____

2 Group these items.

a gamepads + consoles = _____ + _____ = _____

b monitors + keyboards = _____ + _____ = _____

c VR glasses + headphones = _____ + _____ = _____

3 Set these out as an algorithm. **a**

Tens	Ones

b

Tens	Ones

c

Tens	Ones

a consoles + monitors

b headphones + keyboards

c gamepads + VR glasses

4 Which two items:

a add to 500? _____

b total 701? _____

Addition with trading

TERM 1
Week 7

1 Calculate the answer. Don't forget to trade.

a

3	7
+	2
7	

b

2	4
+	1
8	

c

3	8
+	4
9	

Tens Ones

+1	2	7
+	2	5
5	2	

The **ones** add to 12.
Keep the **ones digit (2)**.

Trade the 10 up a
column as **+1**.

2 Write the algorithm and find the answer.

a $75 + 15 =$

+	

b $44 + 37 =$

+	

c $68 + 22 =$

+	

d $63 + 19 =$

+	

3 Complete these additions involving regrouping.

a

1		
2	7	4
+	5	8
3		

b

7	5	2
+	1	8
6		

c

8	2	6
+	1	5
9		

d

6	7	4
+	2	1
8		

4 Rewrite each sum vertically. Calculate each sum. The first one has been done for you.

a $4,672 + 579$

4	6	7	2
+	5	7	9
5	2	5	1

b $6,731 + 5,807$

c $6,925 + 8,176$

d $7,925 + 682$

Subtraction with trading

To trade down
a ten

$$56 = 50 + 6$$

$$= 40 + 16$$

TERM 1
Week 7

1 Trade down 1 ten.

a $46 = 40 + 6$
 $= 30 + \underline{\quad}$

b $72 = 70 + 2$
 $= 60 + \underline{\quad}$

c $85 = 80 + 5$
 $= \underline{\quad} + \underline{\quad}$

d $27 = 20 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

e $51 = 50 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

f $34 = 30 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

g $48 = 40 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

h $93 = 90 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

i $61 = 60 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

j $36 = 30 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

k $69 = 60 + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

l $87 = \underline{\quad} + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

m $45 = \underline{\quad} + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$

n $78 = \underline{\quad} + \underline{\quad}$
 $= \underline{\quad} + \underline{\quad}$



We use trading tens for subtraction.

2 a

Tens	Ones
2	12
3	2
- 1	5

b

Tens	Ones
4	15
5	5
- 2	8

c

Tens	Ones
5	13
6	3
- 4	9

d

Tens	Ones
6	14
7	4
- 5	5

e

Tens	Ones
3	17
4	7
- 1	8

f

Tens	Ones
7	18
8	8
- 3	9

Tens	Ones
5	12
6	2
- 2	7
3	5

I can't take
7 from 2,
so I traded
down a ten.

g

Tens	Ones
6	7
- 4	9

h

Tens	Ones
3	6
- 1	8

i

Tens	Ones
8	5
- 5	6

j

Tens	Ones
5	3
- 2	8

k

Tens	Ones
7	4
- 4	7

l

Tens	Ones
4	8
- 1	9

m

Tens	Ones
9	2
- 3	9

n

Tens	Ones
7	0
- 2	6

More subtraction

TERM 1
Week 7

1

a $\begin{array}{r} 3\ 15 \\ 245 \\ - 128 \\ \hline \end{array}$

b $\begin{array}{r} 372 \\ - 184 \\ \hline \end{array}$

c $\begin{array}{r} 523 \\ - 267 \\ \hline \end{array}$

d $\begin{array}{r} 456 \\ - 189 \\ \hline \end{array}$

e $\begin{array}{r} 612 \\ - 345 \\ \hline \end{array}$

f $\begin{array}{r} 378 \\ - 246 \\ \hline \end{array}$

g $\begin{array}{r} 564 \\ - 278 \\ \hline \end{array}$

h $\begin{array}{r} 789 \\ - 234 \\ \hline \end{array}$

i $\begin{array}{r} 652 \\ - 187 \\ \hline \end{array}$

j $\begin{array}{r} 841 \\ - 356 \\ \hline \end{array}$

2

A  49 passengers

B  67 passengers

C  74 passengers

D  98 passengers

E  55 passengers

What is the difference in number of passengers between train D and each other train?

A $\begin{array}{r} 98 \\ - 67 \\ \hline \end{array}$

B $\begin{array}{r} 98 \\ - \\ \hline \end{array}$

C $\begin{array}{r} \\ - \\ \hline \end{array}$

E $\begin{array}{r} \\ - \\ \hline \end{array}$

3 Which two trains have a difference of:

a 19? $$ b 18? $$ c 12? $$ d 25? $$

4 Which two trains have:

a the greatest difference? $$ b the least difference? $$

5 Complete these subtraction squares. Work mentally.

a $\begin{array}{|c|c|} \hline 62 & 14 \\ \hline 28 & 12 \\ \hline \end{array}$

b $\begin{array}{|c|c|} \hline 73 & 35 \\ \hline 25 & 19 \\ \hline \end{array}$

c $\begin{array}{|c|c|} \hline 58 & 23 \\ \hline 19 & 15 \\ \hline \end{array}$

d $\begin{array}{|c|c|} \hline 90 & 35 \\ \hline 59 & 24 \\ \hline \end{array}$

6 a There are 245 students in a music school. 158 students take guitar lessons. The rest take piano lessons. How many are learning piano?

b There are 387 pencils in total. 264 are sharpened. How many need sharpening?

Work out the answers to complete the crossnumber puzzle.

1 3 8
 - 2 7

2 5 6
 - 3 9

3 9 2
 - 1 7

4 7 3
 - 1 5

5 6 1
 - 3 8

6 9 3
 - 9

7 8 5
 - 3 6

8 6 4
 - 2 8

9 9 1
 - 2 8

10 7 2
 - 3 7

11 7 8
 - 2 4

12 8 4
 - 3 8

13 a 4 3 7
 - 2 4 5

b 8 9 2
 - 5 2 8

c 1 8 2
 - 1 0 6

d 7 9 5
 - 4 2 7

e 6 5 9
 - 3 7 8

14 Write in the missing digits.

a 6 3
+ 6 4

1 3 8

b 5 8
+ 3 5

 0 9

c 8 3
+ 5 9

1 2 3

d 6 7
+ 8 5

 3 9

e 3 9
+ 7 5

1 0 0

f 9
+ 8 5

 2 0

g 3 7
+ 2 8

1 0 9

h 6 7
+ 4 8

9 0

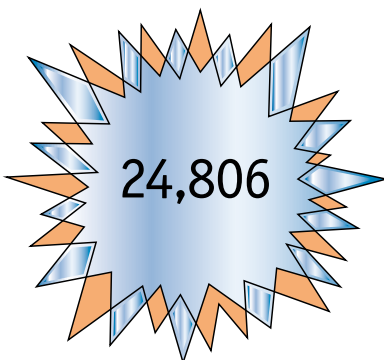
Mastery Checklist

- I can: ☐ add two- and three-digit numbers with trading in written algorithms
☐ subtract two-digit numbers with trading in written algorithms

A



B



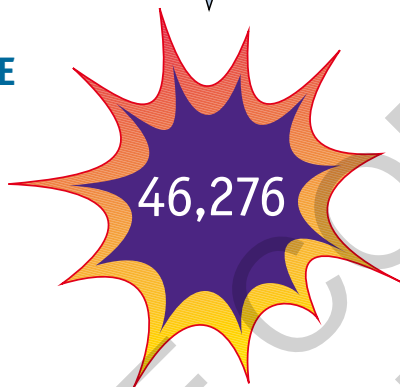
C



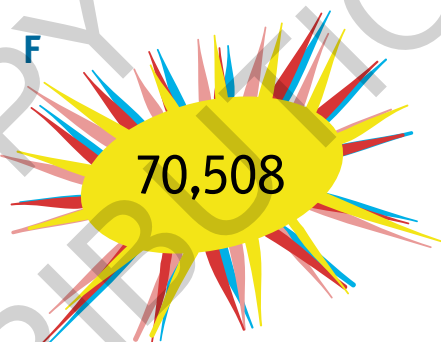
D



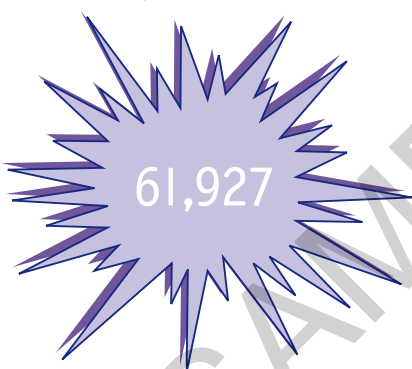
E



F



G



H



I



I Add.

a $B + E + I =$ _____

b $G + F + E =$ _____

c $A + C =$ _____

d $H + D =$ _____

e $A + B + C =$ _____

f $D + E + G =$ _____

g $F + C =$ _____

h $I + H + B =$ _____

i $F + I + B + A =$ _____

j $C + D + E + G =$ _____

Working

- 1 Write an algorithm to take every number on the previous page away from 99,999.

A

B

C

D

E

F

G

H

I

- 2 Use all the digits from 0 to 9 to:

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

- a make two numbers to add for the highest possible total.

- b make two numbers to subtract for the smallest difference possible.

LUKE'S LAVISH LUNCHES



Sashimi \$7.50



Indian Tray \$9.50



Taco \$8.60



Hamburger \$4.80



Grilled sandwich \$5.30



Pizza slice \$6.20

Every work day three friends go to Luke's Lavish Lunches for lunch.
Each day they choose a different combination of dishes.

1 Write down the dishes they might choose and the total cost for each day.

a Monday Sashimi + Sandwich + Taco = \$

b Tuesday _____

c Wednesday _____

d Thursday _____

e Friday _____

2 a Estimate the cost of ordering all six dishes. _____

b Use a calculator to find the actual cost. _____

c Was the calculator useful? _____ Why? _____

Add and subtract problems

TERM 1
Week 8

- 1 Bella takes three dogs for a walk. She charges \$13.50 per dog. How much change does she give from a \$50 note?



Show your working.

- 2 Tim helped his mum build a deck. They bought 500 nails. They used 426 nails on the deck and bent 65 nails. How many nails were left over?



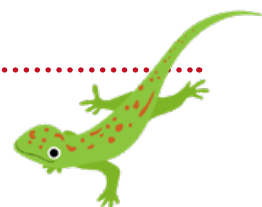
- 3 Maria wrote a 3-page article for the local paper. It had 2,000 words. The first page had 336 words and a photo. The second page had 852 words. How many words were on the last page?



- 4 Alex wrote 7,483 lines of code. Later she had to add 3,275 more lines. When she reviewed her work again, she ended up taking out 2,690 lines. How many lines of code are there now?

- 5 Kev grew 12,800 meal worms to feed the skinks. He fed them 2,368 on Monday, 2,497 on Tuesday and 2,452 on Wednesday. How many meal worms are left for the skinks after this?

Mastery Checklist I can: ☐ add and subtract five-digit numbers
☐ add and subtract prices in dollars and cents
☐ solve addition and subtraction problems



Holiday budget



Make a budget for the Floogles, a family of 2 adults and 2 children (11 and 13).
Plan lots of activities and fun for them for a 5 night/4 day stay.

- 1 What will it cost them? All food is free.

Accommodation

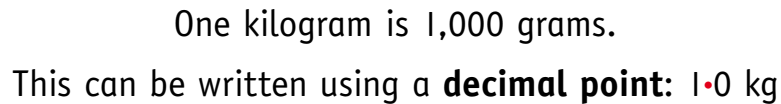
Car Hire

Entertainment

- 2 Which item will cost the most on the holiday? _____

I can solve problems by:

- ☐ using different operations ☐ choosing the correct strategy


$$1 \text{ kg } 200 \text{ g} = 1,200 \text{ g} = 1.2 \text{ kg}$$

- 3,250 g, 1.2 kg, 5 kg, 100 g, 100 kg, 6,000 g, 8.75 kg, 1 g

Grams and kilograms

kilogram **kg**
gram **g**

1,000 g = 1 kg

TERM 1
Week 9

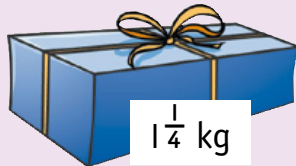
1 Change to kilograms.

- a 3,000 g _____ b 9,000 g _____ c 1,000 g _____
d 7,000 g _____ e 5,000 g _____ f 1,500 g _____ kg _____ g
g 5,200 g _____ kg _____ g h 8,125 g _____ kg _____ g

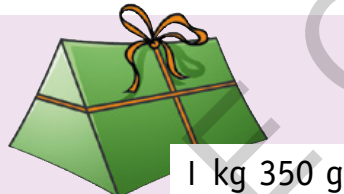
2 Change to grams.

- a 4 kg _____ b 6 kg _____ c 2 kg _____ d 5 kg _____
e 2 kg 600 g _____ f 9 kg 150 g _____
g 3 kg 475 g _____ h 6.5 kg _____
i 2.25 kg _____ j 8.75 kg _____ k 1.5 kg _____

3 A



B



C



D



- a Write the weights in grams. A _____ B _____ C _____ D _____
b Order them from lightest to heaviest. _____

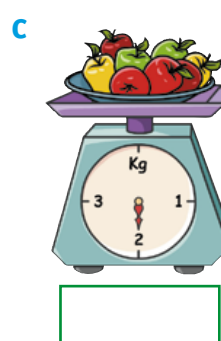
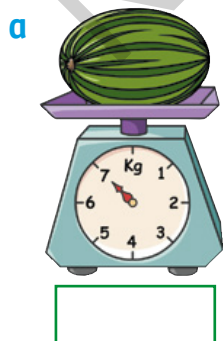
4 How many more grams must be added to make $\frac{1}{2}$ kg?

- a 250 g _____ b 405 g _____ c 110 g _____ d 338 g _____

5 Would you use grams or kilograms to weigh:

- a a Maui dolphin? _____ b a Kākāpō? _____
c an Archey's frog? _____ d a horse? _____
e a packet of biscuits? _____ f a big bag of rice? _____
g a tea bag? _____ h a mattress? _____
i a tea towel? _____ j a dishwasher? _____

6 Write the mass of each object.



The cubic centimetre

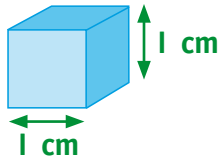
TERM 1
Week 9

Volume is measured in cubic units.

This cube has 1 cm sides.

This cube is one cubic centimetre.

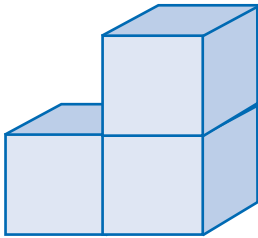
The short form of **one cubic centimetre** = 1 cm^3 .



Volume
The amount of
space an object
takes up

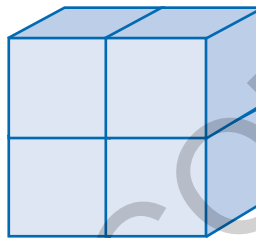
1 How many cubic centimetres in each model?

a



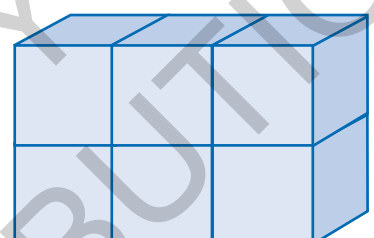
Volume = cm^3

b



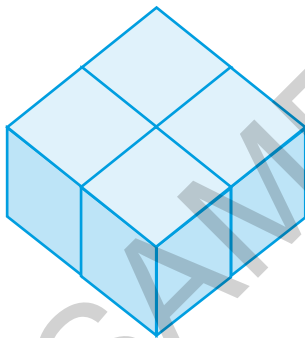
Volume = cm^3

c



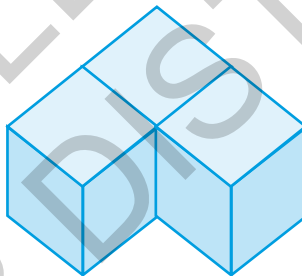
Volume = cm^3

d



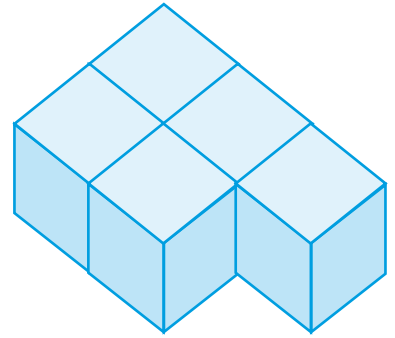
Volume = cm^3

e



Volume = cm^3

f



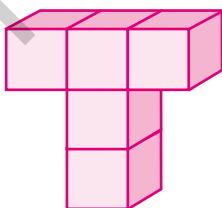
Volume = cm^3

g Which model has the largest volume? _____

h Which models have the same volume? _____

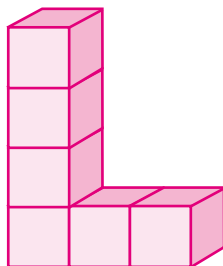
2 Find the volume of each model.

a



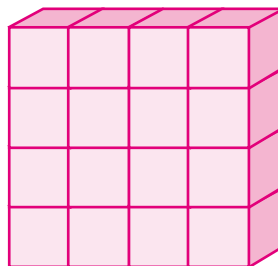
cm^3

b



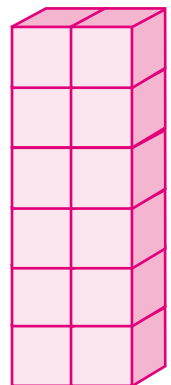
cm^3

c



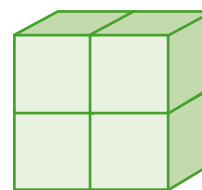
cm^3

d



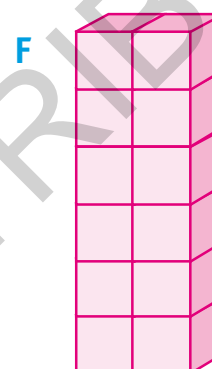
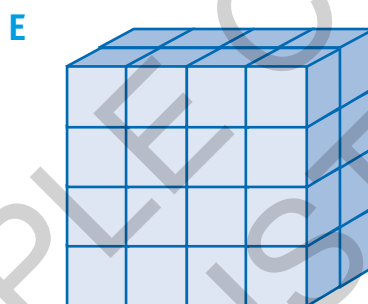
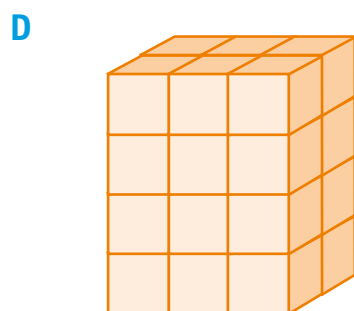
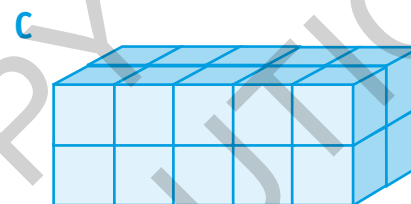
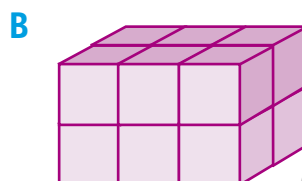
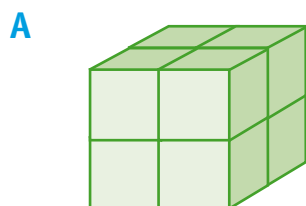
cm^3

A **rectangular prism** model is built with layers of cubes.
To find the **volume** for a rectangular prism model,
work out **how many cubes are in 1 layer**.
Then **multiply by the number of layers**.



Volume
2 cubes per layer
× 2 layers
 $2 \times 2 = 4$ cubes

1 Build these models. Use centicubes to model one layer, then add more layers on top.



2 Imagine each cube above is 1 cm^3 . Find the volume for each model.

	Cubes in 1 layer?		Number of layers?		Volume
A		×		=	
B		×		=	
C		×		=	
D		×		=	
E		×		=	
F		×		=	

Challenge!

How many cubes
in a Rubik's cube?



Mastery Checklist I can: ☐ convert between metric mass units
☐ measure volume using cubic centimetres
☐ weigh items using scales
☐ count layers of cubes to find volume

Measurement: Volume and mass

You will need 1 cm³ blocks that link together and a digital kitchen scale.

- 1
 - a Build a model from 8 blocks.
 - b Measure its mass on the kitchen scale.
 - c Complete: Volume of 8 cm³ = Mass of _____ grams
- 2 Write a statement about how the volume of the model relates to its mass.

- 3 **Build** four different rectangular prism models from the blocks.
- 4 Write the **volume** of each model in cubic centimetres into the table.
- 5 **Estimate the mass** of each model in grams and write it in the table.
- 6 **Measure the mass** of each model on the kitchen scale and write it in the table.
- 7 Put a tick in the **accuracy** column if your estimate was within 10 grams of the measurement.

	Volume	Mass estimate	Mass measurement	Accuracy
A				
B				
C				
D				

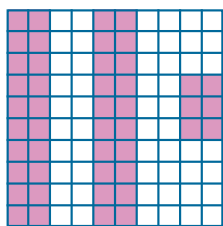
- 8
 - a Were your estimates accurate? _____
 - b Why? _____

I can investigate by:

☐ measuring volume ☐ measuring mass

Checkpoint 2

- 1 Write the tenths and the hundredths and the decimal.



_____ + _____
= _____

p 4

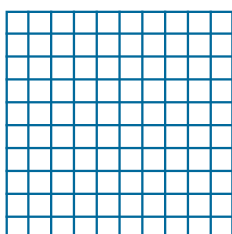
- 2 Tick the largest, circle the smallest.

0.25 0.09 0.41 0.39

p 4

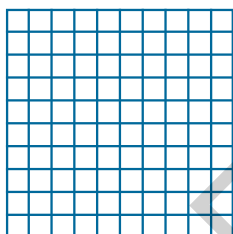
- 3 Colour to show tenths.

a



0.3, $\frac{3}{10}$

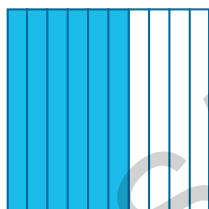
b



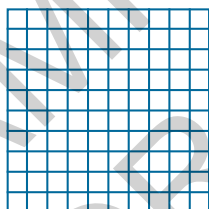
0.8, $\frac{8}{10}$

p 5

- 4 Colour to show the equivalent fraction.



=



p 5

- 5 Write the decimal.

a $\frac{2}{10}$ = _____

b $\frac{7}{10}$ = _____

p 6

- 6 Circle the digit worth 1,000.

1, 1, 7, 1, 5, 1, 8

p 7

- 7 Write 4,578,903 in expanded notation.

p 7

- 8 Compare using <, > or =.

a 349,305 349,306

b 381,450 38,145

c 5,782,910 5,728,910

p 8

- 9 Answer with the place value.

a 0.98 has 9 _____

b 0.98 has 8 _____

p 10

p 11

- 10 Write **equals**, **is more than** or **is less than** to make the statements true.

a 0.7 _____ 0.2

b 0.9 _____ 0.90

c 0.30 _____ 0.6

- 11 Round 437,280 to the nearest:

a hundred _____

b thousand _____

c ten thousand _____

d hundred thousand _____

p 12

- 12 Round to the nearest whole number.

a 3.2 _____ b 7.59 _____

p 14

- 13 Complete the table.

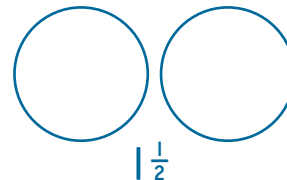
p 16

	241
$\times 10$	
$\times 100$	
$\times 1,000$	
$\div 10$	
$\div 100$	
$\div 1,000$	

- 14 Colour to show:

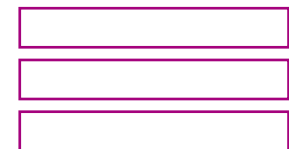
p 18

a



$1\frac{1}{2}$

b



$2\frac{1}{5}$

- 15 Write the mixed numbers above as improper fractions.

p 18

a

b

Checkpoint 2

- 16 Write two equivalent fractions.

p 19

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

- 17 Compare these fractions using $<$, $>$ or $=$.

p 20

a $\frac{2}{5}$ $\frac{\boxed{}}{\boxed{}}$ $\frac{3}{10}$ b $\frac{2}{4}$ $\frac{\boxed{}}{\boxed{}}$ $\frac{4}{8}$
 c $\frac{1}{3}$ $\frac{\boxed{}}{\boxed{}}$ $\frac{3}{6}$ d $\frac{1}{2}$ $\frac{\boxed{}}{\boxed{}}$ $\frac{3}{5}$

- 18 Make an equivalent fraction.
Show your thinking.

p 23

$$\frac{3}{4} = \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

- 19 Shade the diagram to show:

p 24

$$\frac{5}{8} + \frac{7}{8} = \frac{\boxed{}}{\boxed{}}$$



- 20 Make equivalent fractions to add and subtract.

p 24

$$\frac{2}{5} + \frac{3}{4} = \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

- 21 Write an equivalent equation.

p 29

$$17 + 14 = \boxed{} + \boxed{}$$

- 22 Complete the equations.

p 30

$$3 + 9 = \boxed{}$$

$$30 + 90 = \boxed{}$$

$$300 + 900 = \boxed{}$$

- 23 Complete the equations.

p 30

$$13 + 9 = \boxed{} - 9 = \boxed{}$$

$$9 + 13 = \boxed{} - 13 = \boxed{}$$

- 24

p 31

?	380
975	

$$? = \boxed{}$$

25 a
$$\begin{array}{r} 532 \\ + 117 \\ \hline \end{array}$$

b
$$\begin{array}{r} 469 \\ + 253 \\ \hline \end{array}$$

p 34

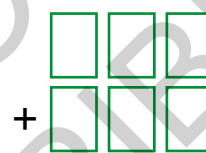
26 a
$$\begin{array}{r} 579 \\ - 224 \\ \hline \end{array}$$

b
$$\begin{array}{r} 785 \\ - 352 \\ \hline \end{array}$$

p 36

- 27 There are 326 grapes in one basket and 273 in another.
How many altogether?

p 41



grapes



- 28 419 of the grapes are sent to the store. How many grapes left?

p 41

29 a 2 kg = $\boxed{}$ g

p 43

b 9,000 g = $\boxed{}$ kg

c 3,000 g = $\boxed{}$ kg

d 7.5 kg = $\boxed{}$ g

e 1,500 g = $\boxed{}$ kg

p 45

- 30 These models were built using cubic centimetre blocks. Write the volume.

