

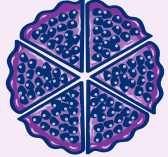

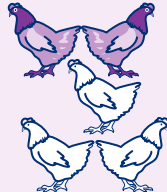
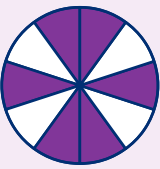
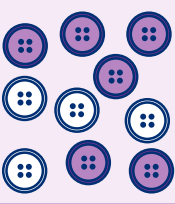
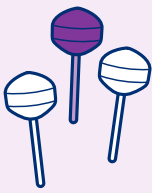
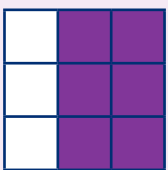


Fractions 3 Answers

$\frac{1}{10}$	three-quarters			$\frac{6}{6}$
		$\frac{1}{4} + \frac{2}{4}$		
				
				two-fifths
		$\frac{1}{2}$		
	six-tenths			
			$\frac{6}{10}$	
				
	one-third			
			$\frac{2}{8}$	
				
				$\frac{1}{4}$

Name _____

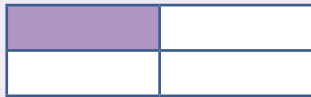
Recognise quarters as fractions of shapes

Key point

$\frac{1}{4}$ is the same as **one-quarter**.

numerator \longrightarrow 1
denominator \longrightarrow 4

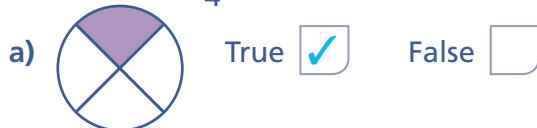
The **4** on the bottom of the fraction (the **denominator**) shows **how many equal parts a whole is split into**.



$\frac{1}{4}$ of this shape is purple. **1** out of **4** **equal parts** is purple.

Get started

1 True or false? $\frac{1}{4}$ of the shape is purple.



2 What fraction of this shape is purple?

$\frac{1}{4}$



3 Write the denominator of one-quarter. 4

4 Write the numerator of one-quarter. 1

5 True or false? One-quarter is purple.



6 Tick the shape with $\frac{1}{4}$ shaded.



7 How many equal parts is a shape divided into to show quarters?

4

8 Write $\frac{1}{4}$ in words.

one-quarter

Now try these

9 Tick the two shapes which have $\frac{1}{4}$ shaded.

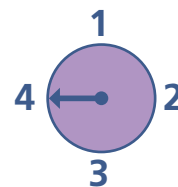


10 True or false? $\frac{1}{4}$ is half of $\frac{1}{2}$. True ☒ False ☐

11 How many quarters make a half? 2 quarters

12 How many people can each have $\frac{1}{4}$ of Jo's birthday cake? 4

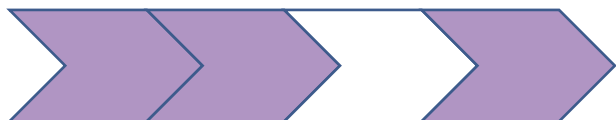
13 What number will the arrow point to after a $\frac{1}{4}$ turn clockwise? 1



14 Write one-quarter as a fraction. $\frac{1}{4}$

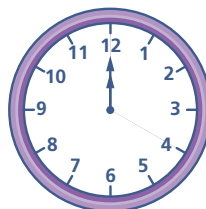
15 True or false? $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$ True ☒ False ☐

16 What fraction of this shape is purple? $\frac{3}{4}$



Challenge

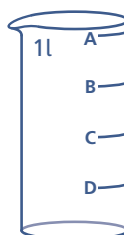
17 What number does the minute hand of a clock point to at 'quarter past'? 3



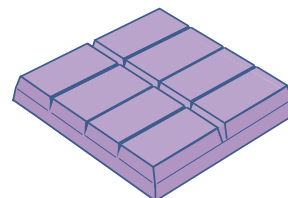
18 What number does the minute hand of a clock point to at 'quarter to'? 9

19 A pizza is cut into four equal slices. What fraction of the whole pizza is one slice? $\frac{1}{4}$

20 $\frac{1}{4}$ litre is poured into this empty 1 litre container. Which letter will the liquid reach? D



21 A chocolate bar has 8 chunks. Sam eats one-quarter of the bar. How many chunks does he eat? 2

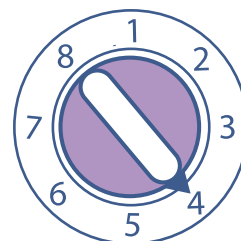


22 A 1m plank of wood is cut into four equal lengths. What fraction of a metre are three of these lengths together? $\frac{3}{4}$ m

23 Joshua spent $\frac{1}{2}$ hour eating the main course of his meal and $\frac{1}{4}$ hour eating dessert.

a) What fraction of an hour did he spend eating altogether? $\frac{3}{4}$ hr

b) How many minutes is this? 45 min



24 The dial on a washing machine has 8 settings. The arrow is pointing to 4. What number will it point to after a quarter turn clockwise? 6

Recognise halves and quarters of sets

Key point

Fractions can be used to show the parts of **sets of objects**.

These cards are sorted into 4 equal-sized groups.

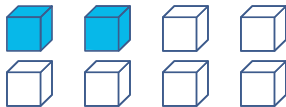


This shows that $\frac{1}{4}$ of the cards are purple and $\frac{3}{4}$ of the cards are white.

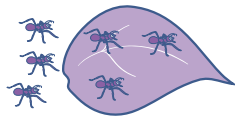
There are 8 cards so $\frac{1}{4}$ of 8 cards = 2 cards and $\frac{3}{4}$ of 8 cards = 6 cards.

Get started

- 1 Colour $\frac{1}{4}$ of this set of cubes.



- 2 What fraction of the ants are on the leaf? $\frac{1}{2}$

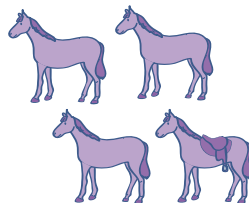


- 3 Tick more squares so that half the squares in this grid are ticked.



- 4 What fraction of the horses are wearing saddles?

$\frac{1}{4}$



- 5 A bus has 12 children on it. Six are girls. What fraction are girls?

$\frac{1}{2}$

- 6 Find one-quarter of 16.

4



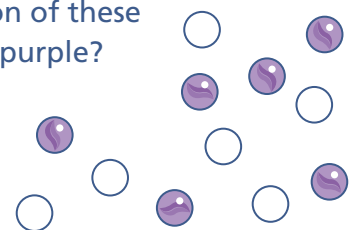
- 7 Write the missing number.

$\frac{1}{2}$

of 20 sweets is 10 sweets.

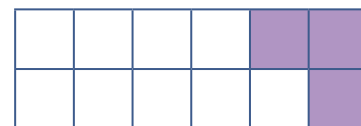
- 8 What fraction of these marbles are purple?

$\frac{1}{2}$



Now try these

- 9 What fraction of the grid is: a) purple? $\frac{1}{4}$ or $\frac{3}{12}$
b) white? $\frac{3}{4}$ or $\frac{9}{12}$



- 10 There are six steps. Aisha is on the third step. What fraction of the way up the steps is she? $\frac{1}{2}$

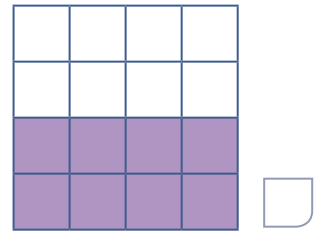
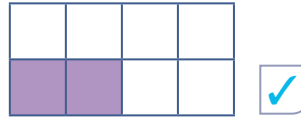
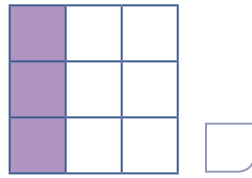
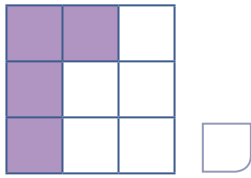
- 11 True or false? Harry ate 2 of the 8 cupcakes in a box. He has eaten one-quarter of them.

True ☒

False ☐



- 12** Tick the tile pattern which shows $\frac{1}{4}$ purple.



- 13** Leah pours 8 cups of juice. 2 cups have orange juice. The rest have apple juice. What fraction of the cups have apple juice? $\frac{3}{4}$ or $\frac{6}{8}$

- 14** Ethan has 8 pound coins. He spends half of them. How much money has he now? £ 4

- 15** A bag contains 6 red apples, 3 yellow apples and 3 green apples.

What fraction of the apples are: a) red? $\frac{1}{2}$ or $\frac{6}{12}$ b) green? $\frac{1}{4}$ or $\frac{3}{12}$

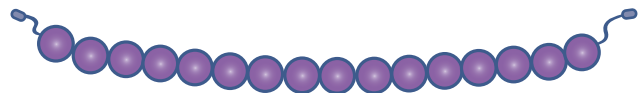
- 16** A small wall is made from 14 bricks in a row. How many bricks in half a row? 7

Challenge

- 17** A book has 20 pages. Ali has read 5 pages. What fraction of the book has Ali read? $\frac{1}{4}$ or $\frac{5}{20}$

- 18** Yusuf works for 21 of the 28 days in February.
What fraction of the days in February does Yusuf not work? $\frac{1}{4}$ or $\frac{7}{28}$

- 19** Three-quarters of the beads on a necklace are silver.
How many beads are silver? 12

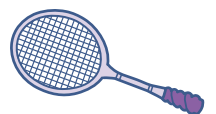


- 20** There are 18 sweets in half a packet of sweets.
How many sweets are there in a quarter of a packet? 9

- 21** How many minutes in:
a) half an hour? 30 min
b) one-quarter of an hour? 15 min
c) three-quarters of an hour? 45 min

- 22** Alice has one pound in 1p coins. She sorts the coins into four equal piles.
What is the value of the coins in one pile? 25 p

- 23** A tennis club has 40 children. $\frac{1}{4}$ of them are boys. How many are girls? 30



- 24** Four teams play in a tournament. Two of the teams wear red.
Write two different fractions to show what fraction of the teams wear red. $\frac{1}{2}$ or $\frac{2}{4}$

Count up and down in halves and quarters

Key point

When counting in halves from 0, every other number is a whole number:

0, $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3 ...

When counting in quarters from 0 remember $\frac{2}{4}$ and $\frac{1}{2}$ have the same value:

0, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{2}{4}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{2}{4}$, $2\frac{3}{4}$, 3 ...

Both are correct.

0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$, $2\frac{3}{4}$, 3 ...

Get started

1 How many faces are purple?

$2\frac{1}{2}$



2 What number is the arrow pointing to?

$\frac{3}{4}$

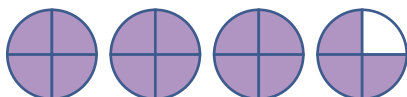


3 What is one-quarter more than $2\frac{1}{2}$?

$2\frac{3}{4}$

4 What is one-quarter less than four wholes?

$3\frac{3}{4}$

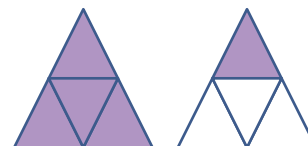


5 Write the missing number in this sequence.

0, $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2 , $2\frac{1}{2}$

6 What is $\frac{1}{4}$ more than $1\frac{1}{4}$?

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



7 Write the next number in the sequence.

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

8 What are eight halves? 4 wholes

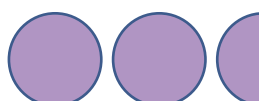
Now try these

9 When counting on in halves, what number comes after 3? $3\frac{1}{2}$

10 What is $1\frac{3}{4} + \frac{1}{4}$? 2

11 Write the next two numbers in this sequence. $7\frac{1}{2}$, $7\frac{1}{4}$, 7, $6\frac{3}{4}$, $6\frac{1}{2}$, $6\frac{1}{4}$, 6

12 How many quarters are in $2\frac{1}{2}$? 10 quarters



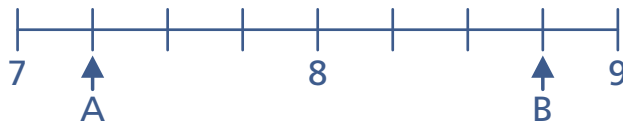
13 How many halves in six wholes? 12 halves

14 How heavy is the pumpkin?

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



15 Look at the number line. Write the values of A and B. A = $7\frac{1}{4}$ B = $8\frac{3}{4}$



16 Count back ten-quarters from 5. What number do you reach? $2\frac{1}{2}$

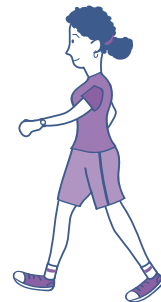
Challenge

17 Lucy counts on an even number of halves from 0. Circle the number she finishes on.

$5\frac{1}{2}$ $6\frac{1}{4}$ 3 $3\frac{3}{4}$ $4\frac{1}{2}$

18 Each of Eva's steps is half a metre apart when she walks.

If she takes 9 steps, how far has she walked? $4\frac{1}{2}$ m



19 What number is two-quarters more than $4\frac{3}{4}$? $5\frac{1}{4}$

20 What is $7\frac{1}{2} - \frac{3}{4}$? $6\frac{3}{4}$

21 A fountain pours $\frac{1}{4}$ litre of water every second.
How much water will it pour in 11 seconds? $2\frac{3}{4}$ l

22 Jack is at the cinema. The adverts last $\frac{1}{2}$ hour and the film lasts $1\frac{3}{4}$ hours.
How long does he watch these in total?

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

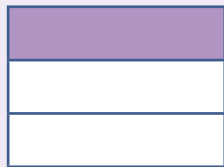


23 Amir weighs $20\frac{1}{2}$ kg. Chloe weighs $3\frac{3}{4}$ kg less. How much does Chloe weigh? $16\frac{3}{4}$ kg

24 How many quarters greater than $8\frac{1}{2}$ is 10? 6 quarters

Understand fractions with the numerator 1

Key point



$\frac{1}{3}$ is **one-third**.

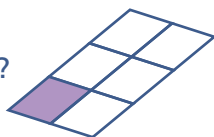
The **3** on the bottom of the fraction (the **denominator**) shows **how many equal parts a whole is split into**.

To find the **denominator**, see how many equal parts the whole is split into. If a whole is split into **3** equal parts, each part is $\frac{1}{3}$ (**one-third**). If it is split into **5** equal parts each part is $\frac{1}{5}$ (**one-fifth**) and so on.

Get started

- 1** How many equal parts has this shape been divided into?

6



- 2** Tick the square that is $\frac{1}{3}$ purple.


☐

☐

☐

☐

☒

- 3** Colour one-fifth of this star.

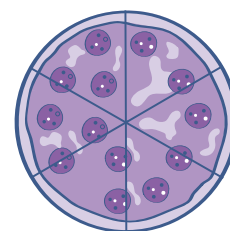


- 4** A cake is cut into 8 equal slices. What fraction of the cake is 1 slice?

$\frac{1}{8}$

- 5** What fraction of this pizza is each slice?

$\frac{1}{6}$



- 6** Ben scored 1 out of 5 points in a quiz. Write this as a fraction.

$\frac{1}{5}$

- 7** How many ninths make up one whole?

9 ninths

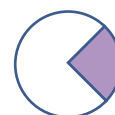
- 8** A chocolate bar has five equal-sized chunks. Write in words what fraction of the bar is one chunk.

one-fifth

Now try these

- 9** Tick the circle that has about $\frac{1}{3}$ shaded.


☒

☐

☐


☐

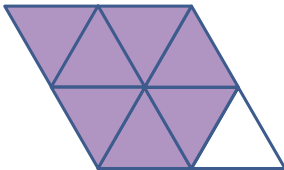
- 10** A melon is cut into seven equal slices. What fraction of the melon is one slice? $\frac{1}{7}$

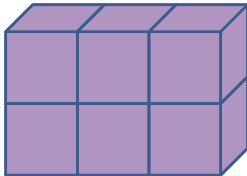
- 11** How many eighths make: a) a whole? 8 eighths b) a half? 4 eighths

- 12** How many people can each have a sixth of Sara's birthday cake? 6

13 What fraction of these beads are white? $\frac{1}{7}$ 

14 True or false? One-fifth of this shape is purple.
True ☐ False ☒ 

15 What fraction of this shape is not purple?
 $\frac{1}{8}$ 

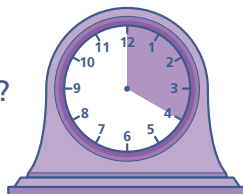
16 What fraction of this cuboid is each cube? Write the fraction in words.
one-sixth 

Challenge

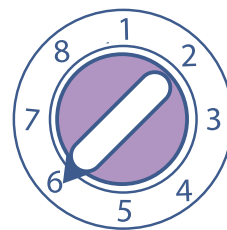
17 A tabletop is covered in tiles. Eight tiles are white and one is green. What fraction of the tiles are green? $\frac{1}{9}$

18 A 1m stick is cut into five equal lengths. What fraction of a metre is each length? $\frac{1}{5}$ m

19 One-quarter of an hour is 15 minutes.
How many minutes is one-third of an hour?
20 min



20 The dial on a dishwasher has 8 settings. The arrow points to 6.
What will it point to after an eighth of a turn clockwise? 7



21 Isaac pours one cup of apple juice and four cups of orange juice into a jug. What fraction of the mixture is apple juice? $\frac{1}{5}$

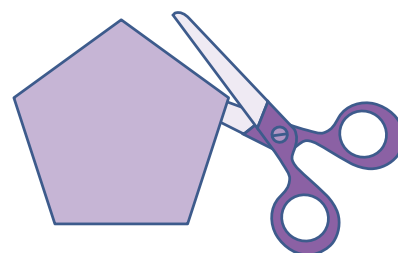
22 The minute hand of a clock moves from 12 to 1.
What fraction of the clock face has the hand moved? $\frac{1}{12}$

23 If one whole is divided by 3, what fraction do you get?

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

24 Amy makes a hanging decoration using only paper pentagons of the same size. She uses 5 red, 2 gold and 1 silver pentagon.
What fraction of the decoration is:

a) silver? $\frac{1}{8}$ b) not silver? $\frac{7}{8}$



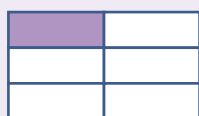
Compare fractions with the numerator 1

Key point

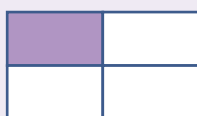
The **denominator** shows how many equal parts a whole is split into.

The **more parts** the whole is split into, the **smaller** each part is.

For fractions with the **numerator 1**, the **larger** the **denominator** the **smaller** the **value of the fraction**.



$\frac{1}{6}$ is smaller than $\frac{1}{4}$.
 $\frac{1}{6} < \frac{1}{4}$



Get started

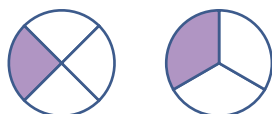
- 1 True or false? $\frac{1}{4}$ is larger than $\frac{1}{2}$.

True ☐

False ☒

- 2 Write in words the name of the larger fraction shown.

one-third



- 3 Write in digits the smaller fraction shown.

$\frac{1}{4}$



- 4 True or false? $\frac{1}{3}$ is greater than $\frac{1}{2}$.

True ☐

False ☒

- 5 Which makes larger slices?

A pie cut into 4 slices. ☒

The same pie cut into 5 slices. ☐

- 6 Circle the fraction that is smaller than one-quarter.

$\frac{1}{3}$

$\frac{1}{2}$

$\frac{1}{5}$

- 7 True or false? $\frac{1}{3} < \frac{1}{2}$

True ☒

False ☐

- 8 Use either the $<$ or $>$ sign to show which is larger.

$\frac{1}{6}$ ☒ $\frac{1}{4}$

Now try these

- 9 Is one-eighth of a kilogram more or less than one-quarter of a kilogram? less

- 10 Tick to show how the fractions in this sequence are ordered: $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$
 smallest to largest ☐ largest to smallest ☒

- 11 Which letter on the number line shows:



a) $\frac{1}{2}$? C b) $\frac{1}{8}$? A

c) Which of the two fractions is larger? $\frac{1}{2}$

12 Two jugs are the same size. Jug A is $\frac{1}{8}$ full. Jug B is $\frac{1}{6}$ full. Which jug contains more? B

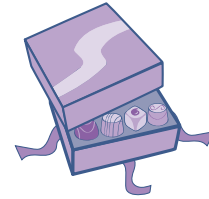
13 Tick the longer time. $\frac{1}{6}$ of an hour ☐ $\frac{1}{2}$ an hour ☒

14 Write these fractions from smallest to largest:

$\frac{1}{7}$ $\frac{1}{3}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{7}$ $\frac{1}{3}$

15 Callum has a box of chocolates. He gives $\frac{1}{4}$ to Sam and $\frac{1}{6}$ to Li.

Who gets more chocolates – Sam or Li? Sam



16 Write these fractions from smallest to largest:

$\frac{1}{4}$ $\frac{1}{2}$ $\frac{1}{8}$ $\frac{1}{6}$ $\frac{1}{8}$ $\frac{1}{6}$ $\frac{1}{4}$ $\frac{1}{2}$

Challenge

17 Alfie cuts two pizzas of the same size into slices. He cuts one into fifths and the other into sixths. Alfie eats one of the smaller slices. What fraction of a whole pizza does he eat? $\frac{1}{6}$

18 What is the missing number if this fraction is larger than one-fifth but smaller than one-third?

$\frac{1}{4}$

19 Emma walked for one-quarter of a kilometre. Rosie walked for one-sixth of a kilometre. Who walked further? Emma

20 Draw ticks on one-eighth of this grid and crosses on one-sixth. Are there more squares with ticks or crosses? crosses

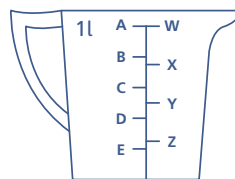
✓					×
		×	✓		
×	✓				
				×	

21 Cross out one of these fractions so that the rest are in order of size: $\frac{1}{6}$ $\frac{1}{4}$ $\frac{1}{3}$ ~~$\frac{1}{5}$~~ $\frac{1}{2}$

22 On this jug, which letter shows:

a) $\frac{1}{4}$ of a litre? Z

b) $\frac{1}{5}$ of a litre? E



23 A bag contains 24 nuts. Aaron eats $\frac{1}{3}$ of them. Billy eats $\frac{1}{8}$ of them. Safa eats $\frac{1}{2}$ of them.

a) Who eats the most nuts? Safa

b) How many more nuts does Aaron eat than Billy? 5



24 Finn mixed some paint. He used $\frac{1}{3}$ l of white paint, $\frac{1}{5}$ l of red paint and $\frac{1}{4}$ l of blue paint. Tick the statement that is true. He used:

more red than blue. ☐ more blue than white. ☐ more white than blue. ☒

Recognise unit fractions as a division of a quantity

Key point

If the top number (the **numerator**) of a fraction is **1**, it is called a **unit fraction**.

$\frac{1}{3}$, $\frac{1}{12}$, $\frac{1}{5}$, $\frac{1}{9}$, $\frac{1}{7}$ These are called **unit fractions**.

To find a **unit fraction** of a quantity, divide the **quantity** by the **denominator**.


numerator \longrightarrow $\frac{1}{10}$ of £50 = £50 \div 10 = £5 $\frac{1}{9}$ of 27m = 27m \div 9 = 3m
denominator \longrightarrow 10

Get started

1 Find $\frac{1}{5}$ of 25cm.
5 cm

2 Find $\frac{1}{10}$ of 70kg.
7 kg

3 What length is one-fifth of this line?
2 cm



4 Find $\frac{1}{2}$ of 74ml.
37 ml

5 Find one-quarter of 12p.
3 p

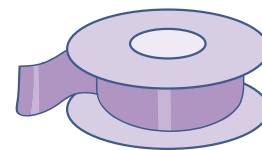
6 Find $\frac{1}{10}$ of 40g.
4 g

7 Write the missing number.
 $\frac{1}{2}$ of 12m = 6m

8 Add $\frac{1}{8}$ of 24p to $\frac{1}{4}$ of 24p.
9 p

Now try these

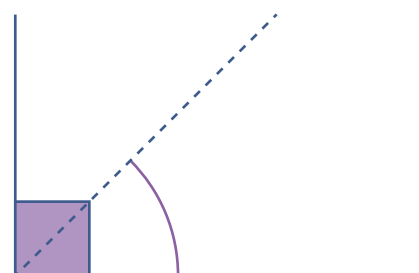
9 A metre of ribbon costs £4.
What length of ribbon would you get for £1? $\frac{1}{4}$ m



10 How much less than 8cm is $\frac{1}{10}$ of 60cm? 2 cm

11 Find $\frac{1}{3}$ of £9 plus $\frac{1}{3}$ of £6. £ 5

12 A right angle is 90°.
How many degrees is half a right angle? 45 °



13 What is one-third of 27? 9

14 James earns £600. He gives one-tenth of his wages to charity.
How much does he give to charity? £ 60

15 Dhruv takes a quarter of the money out of each of these boxes.
How much does he take in total? £ 5



16 What is one-fifth of £60? £ 12

Challenge

17 One-quarter of a class of 28 children wear glasses.
How many wear glasses? 7



18 The length of a rectangle is 15cm. Its width is one-third of its length.
Find the perimeter of the rectangle. 40 cm



19 Find the difference in kilograms between $\frac{1}{4}$ of 32kg and $\frac{1}{8}$ of 48kg. 2 kg

20 $\frac{1}{3}$ of £36 $\frac{1}{8}$ of £40 $\frac{1}{10}$ of £110

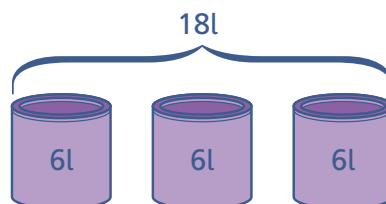
Look at the fractions above. What is the value of the:

a) largest of these amounts? £ 12 b) smallest of these amounts? £ 5

21 How many minutes is $\frac{1}{6}$ of an hour? 10 min

22 Write the missing number to match this picture.

$\frac{1}{3}$ of 18l = 6l



23 Amber divides 60 by 5 to help her answer the question 'What fraction of an hour is 5 minutes?'
Write her answer. $\frac{1}{12}$ hr

24 A 3m length of string is cut into 10 equal pieces. Write the length of each piece:

a) as a fraction of a metre. $\frac{3}{10}$ m

b) in centimetres. 30 cm

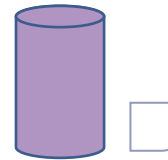
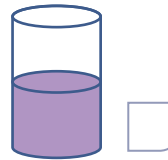
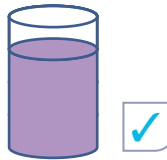
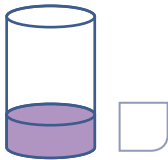
Check-up test 1

- 1 Find the value of $\frac{1}{4}$ of these coins. 2 p



1 mark

- 2 Tick the container that is about $\frac{3}{4}$ full.



1 mark

- 3 A sheet of paper is cut into four equal pieces.
What fraction of the whole sheet is three pieces? $\frac{3}{4}$



1 mark

- 4 How many quarters are equal to one-half? 2 quarters



1 mark

- 5 True or false? Three-quarters is purple. True ☐ False ☒



1 mark



- 6 Draw a cross on the line to show $2\frac{1}{4}$.



1 mark

- 7 How many pence is half of £1? 50 p



1 mark

- 8 Write the answer to $1 \div 2$ as a fraction. $\frac{1}{2}$



1 mark

- 9 True or false? $\frac{1}{3}$ of a shape is smaller than $\frac{1}{2}$ of the shape.

True ☒ False ☐



1 mark

- 10 One-quarter subtracted from three-quarters is equal to how many halves?
1 halves



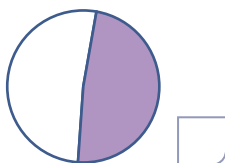
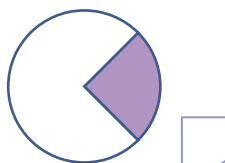
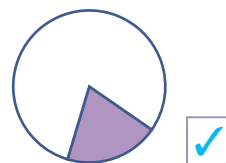
1 mark

- 11** An orange is cut into six equal pieces. What fraction of the orange is one piece?

$\frac{1}{6}$

☐
1 mark

- 12** Tick the circle that has about $\frac{1}{5}$ shaded.


☐

☐

☐

☒

☐
1 mark

- 13** A 1m plank of wood is cut into eight equal lengths.

What fraction of a metre is each length? $\frac{1}{8}$ m

☐
1 mark

- 14** True or false? $\frac{1}{3}$ is larger than $\frac{1}{6}$.

True ☒ False ☐

☐
1 mark

- 15** Two cups are the same size. Cup A is $\frac{1}{5}$ full. Cup B is $\frac{1}{7}$ full.

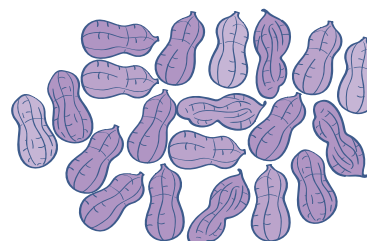
Which cup contains more? A

☐
1 mark

- 16** A bag contains 20 nuts. Jon has $\frac{1}{10}$ of them, Dan has $\frac{1}{2}$ of them and Mia has $\frac{1}{5}$ of them.

a) Who has the most nuts? Dan

b) How many more nuts does Mia have than Jon? 2



☐
1 mark

- 17** Find $\frac{1}{6}$ of 30cm. 5 cm

☐
1 mark

- 18** What is one-fifth of 20? 4

☐
1 mark

- 19** How many minutes is $\frac{1}{10}$ of an hour? 6 min

☐
1 mark

- 20** A 3m length of tinsel is cut into 4 equal pieces. Write the length of each piece:

a) as a fraction of a metre. $\frac{3}{4}$ m

b) in centimetres. 75 cm



☐
1 mark

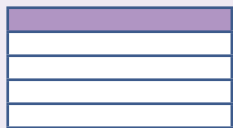
Total

20 marks

Understand non-unit fractions as areas of shapes

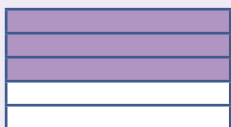
Key point

Unit fractions have the numerator 1, for example, $\frac{1}{5}$.



$\frac{1}{5}$ is 1 part of a whole when a whole is split into 5 equal parts.

When the **numerator** is **not** 1, the fraction means several parts of a whole.
The **numerator** (the top number) shows how many parts are being described.



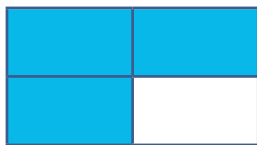
$\frac{3}{5}$ is 3 parts of a whole when a whole is split into 5 equal parts.

Get started

- 1 What fraction of this shape is purple?



- 2 Colour three-quarters of this shape.



- 3 True or false? Three-eighths are purple.

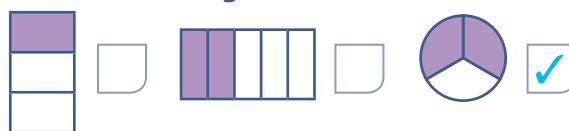
True ☐

False ☒



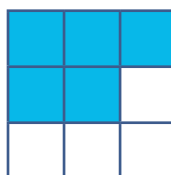
- 4 Write $\frac{3}{5}$ in words. three-fifths

- 5 Which shape is $\frac{2}{3}$ purple?



- 6 Write sixth-sevenths in digits. $\frac{6}{7}$

- 7 Colour five-ninths of this shape.

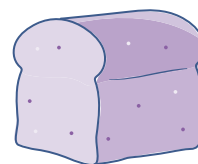


- 8 Write the numerator of four-fifths.

4

Now try these

- 9 A loaf of bread is cut into six equal slices. What fraction of the whole loaf is five slices? $\frac{5}{6}$



- 10 Tick the shape that is $\frac{2}{5}$ purple.



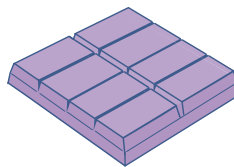
- 11 A block of cheese is cut into eight equal slices. Luke eats five of the slices.
What fraction of the whole cheese does he eat? $\frac{5}{8}$

- 12** A rope is cut into seven equal lengths.

What fraction of the whole rope is five of the lengths? $\frac{5}{7}$

- 13** A chocolate bar has 8 chunks. Dev eats $\frac{3}{8}$ of the bar.

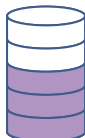
What fraction of the bar is left? $\frac{5}{8}$



- 14** Five girls each eat one-sixth of a pie. What fraction is left over? $\frac{1}{6}$

- 15** What fraction of the cylinder is purple?

$\frac{3}{5}$



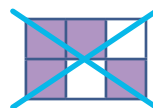
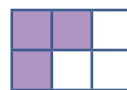
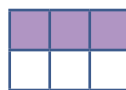
- 16** True or false? $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$ True ☒ False ☐

Challenge

- 17** A patio is made from nine square tiles, all the same size. One tile is black and the rest are white.

What fraction of the patio is white? $\frac{8}{9}$

- 18** Cross out the pattern that does not show $\frac{3}{6}$ purple.

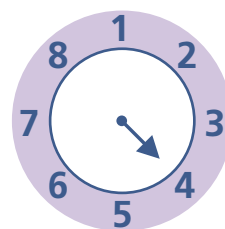


- 19** Colour parts of this shape to show $\frac{7}{9}$.



- 20** To what number will the arrow point after $\frac{3}{8}$ of a turn clockwise?

7



- 21** A rug is $\frac{1}{8}$ red, $\frac{3}{8}$ yellow, $\frac{3}{8}$ white and the rest is orange. What fraction is orange? $\frac{1}{8}$

- 22** How many ninths more than $\frac{1}{9}$ is $\frac{5}{9}$? 4 ninths

- 23** $\frac{3}{7}$ $\frac{1}{7}$ $\frac{6}{7}$ $\frac{4}{7}$

Look at the fractions above. Which of these fractions is:

- a) the largest? $\frac{6}{7}$ b) the smallest? $\frac{1}{7}$

- 24** The minute hand of this clock turns $\frac{2}{3}$ of a full turn from the top.

What number will it be pointing to? 8



Recognise tenths and count in tenths

Key point

When something is divided into 10 equal parts each part is called a **tenth**.



When counting in tenths, every tenth number will be a whole number.

0, $\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, $\frac{9}{10}$, 1, ...

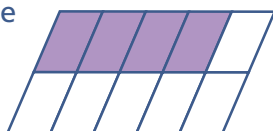
When continuing this sequence remember that $\frac{10}{10}$ and 1 have the same value.

1, $1\frac{1}{10}$, $1\frac{2}{10}$, $1\frac{3}{10}$, $1\frac{4}{10}$... or $\frac{10}{10}$, $\frac{11}{10}$, $\frac{12}{10}$, $\frac{13}{10}$, $\frac{14}{10}$... Both are correct.

Get started

- 1 How many tenths of the whole are purple?

4 tenths



- 2 Write what number the arrow is pointing to.

$\frac{7}{10}$



- 3 What is one-tenth more than $\frac{8}{10}$?

$\frac{9}{10}$

- 4 What is two-tenths less than one whole?

$\frac{8}{10}$

- 5 Which number is missing from this sequence?

$\frac{8}{10}$, $\frac{9}{10}$, 1, $1\frac{1}{10}$, $1\frac{2}{10}$

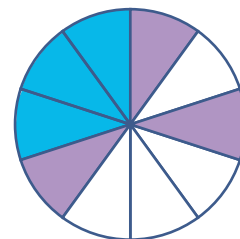
- 6 How many tenths of a metre make a whole metre?

10 tenths

- 7 Write the next number in the sequence.

$3\frac{4}{10}$, $3\frac{5}{10}$, $3\frac{6}{10}$, $3\frac{7}{10}$, $3\frac{8}{10}$

- 8 Colour three more tenths of this circle.



Now try these

- 9 One-tenth of a kilogram of sand and $\frac{6}{10}$ of a kilogram of cement are put into a bucket. What fraction of a kilogram does the mixture weigh? $\frac{7}{10}$ kg



- 10 What is $2\frac{9}{10} + \frac{1}{10}$? 3

- 11** Colour squares so that half of this grid is coloured.
How many tenths are now coloured? 5 tenths



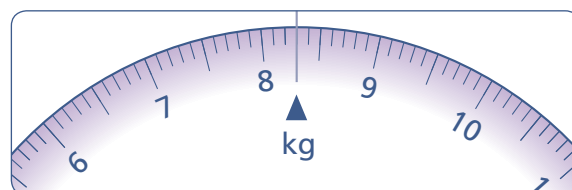
- 12** How many tenths are in two whole ones? 20 tenths

- 13** Write the missing number.

$$\frac{12}{10} = 1 \frac{\boxed{2}}{10}$$

- 14** Write the missing number to give the mass shown.

$$8 \frac{\boxed{3}}{10} \text{ kg}$$



- 15** How many centimetres in one-tenth of a metre? 10 cm

- 16** Count back six-tenths from 5. What number do you reach? $4\frac{4}{10}$

Challenge

- 17** What is the difference between one whole and three-tenths? $\frac{7}{10}$

- 18** Some square carpet tiles have sides that are each $\frac{1}{10}$ of a metre.

How long is a line of 13 touching tiles, in metres? $1\frac{3}{10}$ m



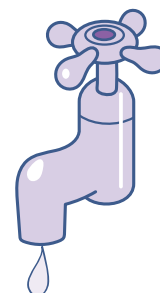
- 19** Write the missing fractions in this sequence.

$$\frac{15}{10}, \frac{\boxed{14}}{10}, \frac{13}{10}, \frac{12}{10}, \frac{\boxed{11}}{10}, 1$$

- 20** True or false? $\frac{5}{10}$ is equal to $\frac{1}{2}$. True ☒ False ☐

- 21** If $\frac{1}{10}$ litre of water flows out of a tap every second, how many litres will flow out in 20 seconds?

2 l



- 22** A line is divided into 10 equal parts.
If nine of the parts measure 9cm in total, what is the length of the whole line? 10 cm

- 23** Erin ran a race in $10\frac{1}{2}$ seconds. Kelly took four-tenths of a second longer.

How long did Kelly take? $10\frac{9}{10}$ sec

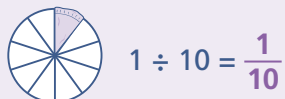


- 24** How many tenths greater than $3\frac{1}{2}$ is 5? 15 tenths

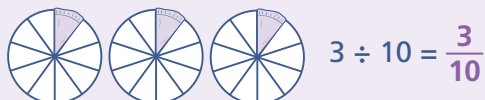
Recognise that tenths arise from dividing by 10

Key point

When 1 pie is shared equally between 10 people, each gets one-tenth.



When 2 pies are shared equally between 10 people each gets two-tenths, and so on.



Get started

1 $4 \div 10 = \frac{4}{10}$

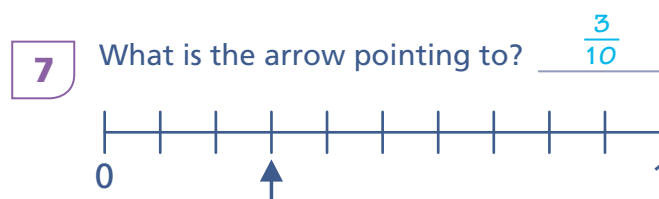
2 $7 \div 10 = \frac{7}{10}$

3 What is nine divided by ten, as a fraction?
 $\frac{9}{10}$

4 $9 \div 10 = \frac{9}{10}$

5 What is 2 melons shared equally between 10, as a fraction? $\frac{2}{10}$

6 What number divided by 10 gives $\frac{6}{10}$?
6

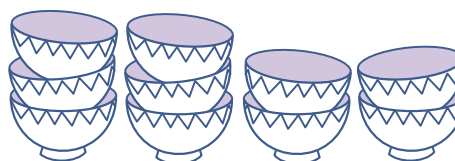


8 Four divided by ten. Write the answer in words.
four-tenths

Now try these

9 If 2 cakes are divided equally between 10 people, what fraction of a cake does each get? $\frac{2}{10}$

10 One pot of yoghurt is shared equally into 10 bowls.
What fraction of the pot is in each bowl? $\frac{1}{10}$



11 An 8m rope is cut into 10 equal lengths. What fraction of a metre is each length? $\frac{8}{10}$ m

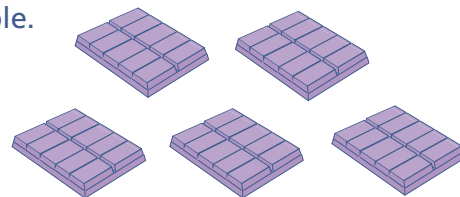
12 A machine makes 10 nails from a piece of metal weighing $\frac{9}{10}$ g. What is the weight of each nail as a fraction of a gram? $\frac{9}{10}$ g

13 Dad poured three litres of lemonade equally into 10 cups. How much is there in each cup?
Give your answer as a fraction of a litre. $\frac{3}{10}$ l

14 These five bars of chocolate are split equally between 10 people.

a) How many chunks does each get? 5

b) What fraction of a bar is this? $\frac{1}{2}$ or $\frac{5}{10}$



15 Tick which is larger. $3 \div 10$ ☒ $\frac{2}{10}$ ☐

16 10 sticks are laid touching in a line. Each stick is $\frac{7}{10}$ m long.
What is the length of the line? 7 m

Challenge

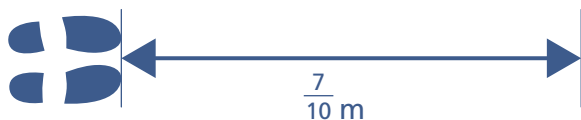
17 True or false? 10 lots of $\frac{3}{10}$ is 3 wholes. True ☒ False ☐

18 A line of 10 squares measures 5m.
How long is each square, as a fraction of a metre? $\frac{5}{10}$ or $\frac{1}{2}$ m

19 10 identical boots weigh 4kg in total.
As a fraction of a kilogram, what does one boot weigh? $\frac{4}{10}$ kg



20 As he walks, each of Dominic's steps is $\frac{7}{10}$ m apart.
If he takes 10 steps, how far from the start has he walked? 7 m



21 Divide five by ten. Circle two correct answers. $\frac{1}{5}$ $\frac{10}{5}$ $\frac{5}{10}$ $\frac{1}{10}$ $\frac{1}{2}$

22 A bag of sugar is 2kg. Each jar holds $\frac{2}{10}$ kg of sugar.
How many jars are needed for all the sugar? 10



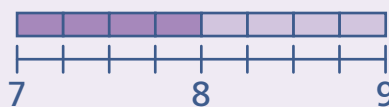
23 Luke walks from home to work and back again each day for 5 days. He walks 8km in total. What is the distance from his home to his work, as a fraction of a kilometre? $\frac{8}{10}$ km

24 The digit after a decimal point shows the number of tenths, for example, $0.2 = \frac{2}{10}$.
Write 0.4 as a fraction. $\frac{4}{10}$

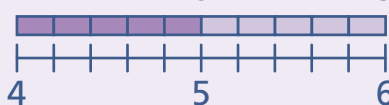
Use fractions as numbers on a number line

Key point

Each whole number on a line can be split into parts and described using fractions.



Here each whole is split into **quarters**.



Here each whole is split into **fifths**.

A whole number and a fraction can be used to show points on the line, for example:

$7\frac{1}{4}$, $8\frac{3}{4}$, $4\frac{3}{5}$, $5\frac{4}{5}$ These are called **mixed numbers**.

Get started

- 1 Write the number shown by the cross on the number line. $4\frac{2}{3}$

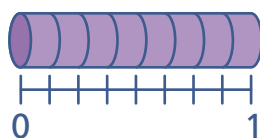


- 2 Write the number shown by the arrow on the number line above.

$5\frac{2}{3}$

- 3 How many equal parts is this divided into?

8



- 4 What is the missing number?



$3\frac{2}{5}$

- 5 What is one-fifth less than 5 wholes?

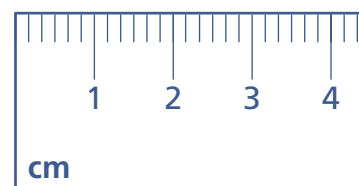
$4\frac{4}{5}$

- 6 Which number is missing from this sequence?

$0, \frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, 1, 1\frac{1}{5}, 1\frac{2}{5}$

- 7 How many equal parts is each whole on this ruler divided into?

6

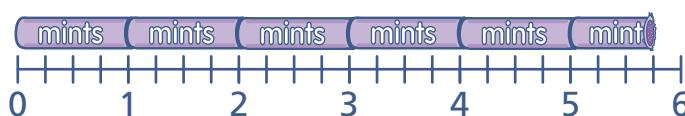


- 8 What number is the same as five-fifths?

1

Now try these

- 9 How many packets are shown? $5\frac{3}{4}$



- 10 What is $\frac{1}{10}$ more than $3\frac{7}{10}$? $3\frac{8}{10}$

- 11 When counting on in sixths, what number comes after 2? $2\frac{1}{6}$

12 Write the next two numbers in the sequence. $6, 6\frac{1}{4}, 6\frac{1}{2}, 6\frac{3}{4},$ 7, $7\frac{1}{4}$

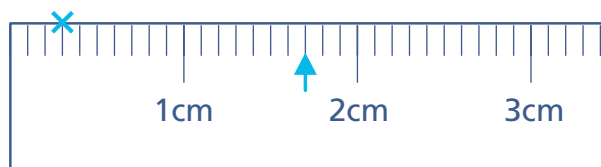
13 How many thirds in two whole ones? 6 thirds

14 Count back three-tenths from two. What number do you reach? $1\frac{7}{10}$

15 This ruler shows tenths of a centimetre.

a) Draw a cross to show $\frac{3}{10}$ cm.

b) Draw an arrow to show $1\frac{7}{10}$ cm.



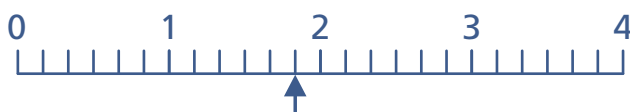
16 How many tenths are there in $2\frac{1}{2}$? 25 tenths

Challenge

17 Count back $\frac{2}{3}$ from 4. What number do you reach? $3\frac{1}{3}$

18 What is the difference between $1\frac{1}{5}$ and $1\frac{3}{5}$? $\frac{2}{5}$

19 Count on four-sixths from the arrow on the line. Where do you land? $2\frac{3}{6}$ or $2\frac{1}{2}$



20 What is $7\frac{7}{8} - \frac{4}{8}$? $7\frac{3}{8}$

21 This line is split into twelfths. What is the missing number?



$$\frac{1}{2} = \frac{6}{12}$$

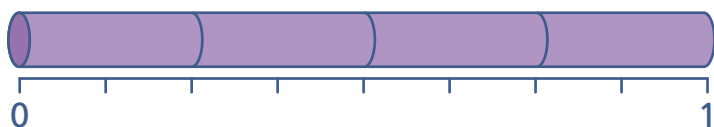
22 Toby jumps $4\frac{3}{10}$ m in the long jump and Libby jumps $5\frac{3}{10}$ m.

How much further does Libby jump than Toby? 1 m



23 True or false? $\frac{1}{4} = \frac{2}{8}$

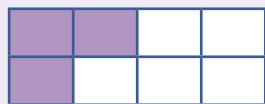
True ☒ False ☐



24 How many fifths greater than 8 is 9? 5 fifths

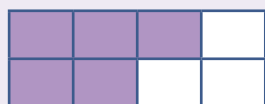
Compare fractions with the same denominator

Key point



$\frac{3}{8}$ is purple.

The shape is split into 8 equal parts (denominator) and 3 of the parts are purple (numerator).



$\frac{5}{8}$ is purple.

The shape is split into 8 equal parts (denominator) and 5 of the parts are purple (numerator).

$$\frac{3}{8} < \frac{5}{8}$$

If the **denominators** are the same, fractions can be compared using just the **numerators**.

Get started

- 1 True or false? $\frac{5}{8}$ is larger than $\frac{1}{8}$.

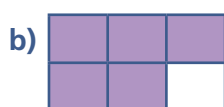
True ☒

False ☐

- 2 Write what fraction of each shape is purple.



$$\frac{1}{6}$$



$$\frac{5}{6}$$

- 3 Which is more? $\frac{1}{6}$ of an apple or $\frac{5}{6}$ of the same apple? $\frac{5}{6}$

- 4 Circle the larger fraction. $\frac{3}{5}$ $\frac{2}{5}$

- 5 Which letter on the number line shows:

a) $\frac{6}{8}$? F b) $\frac{4}{8}$? D



- 6 True or false? $\frac{5}{10} < \frac{7}{10}$

True ☒

False ☐

- 7 Use either the $<$ or $>$ sign to show which fraction is larger.

$$\frac{5}{4} > \frac{3}{4}$$

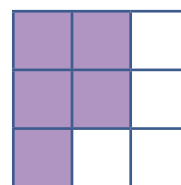
- 8 Is $\frac{3}{4}$ of a kilogram more or less than $\frac{1}{4}$ of a kilogram? more

Now try these

- 9 Write the fraction of this shape that is:

a) $\frac{5}{9}$ b) $\frac{4}{9}$

c) Which of these two fractions is larger? $\frac{5}{9}$



- 10 Tick to show how the fractions in this sequence are ordered: $\frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}$

smallest to largest ☒ largest to smallest ☐

- 11 Mark $\frac{3}{8}$ with a cross and $\frac{7}{8}$ with an arrow on this line.



- 12** Circle the fraction that is larger than one-half. $\frac{1}{8}$ $\frac{3}{8}$ $\frac{7}{8}$
- 13** Three jugs are the same size. Jug A is $\frac{6}{10}$ full. Jug B is $\frac{7}{10}$ full. Jug C is $\frac{10}{10}$ full. Which jug contains most? C
- 14** Cross out one of these fractions so that the rest are in order of size. $\frac{3}{10}$ $\frac{4}{10}$ $\frac{6}{10}$ ~~$\frac{2}{10}$~~ $\frac{9}{10}$
- 15** Write these fractions from smallest to largest: $\frac{6}{7}$ $\frac{1}{7}$ $\frac{4}{7}$

1
7

4
7

6
7
- 16** A banana was cut into 9 equal pieces. Natasha ate $\frac{4}{9}$ of it and Beata ate the rest. Who ate more? Beata



Challenge

- 17** Holly mixed some paint. She used $\frac{3}{8}$ l of red paint, $\frac{3}{8}$ l of blue paint and $\frac{2}{8}$ l of purple paint. Tick the statement that is true. She used:
 a) more blue than red. ☐ b) more purple than red. ☐ c) more red than purple. ☒
- 18** Write these fractions from smallest to largest: $\frac{4}{9}$ $\frac{2}{9}$ $\frac{5}{9}$ $\frac{3}{9}$

2
9

3
9

4
9

5
9
- 19** Liam says that, because $\frac{4}{8} = \frac{1}{2}$, then $\frac{1}{2} < \frac{5}{8}$.
 Is he correct? Yes ☒ No ☐
- 20** Each whole is split into 5 equal parts on a number line. Crosses are marked at three points: $\frac{4}{5}$, $1\frac{1}{5}$ and $\frac{2}{5}$.
 Write these numbers from smallest to largest. $\frac{2}{5}$ $\frac{4}{5}$ $1\frac{1}{5}$
- 21** A set contains 12 cards. Connor has $\frac{5}{12}$ of them, Marta has $\frac{4}{12}$ of them and Jamie has the rest of them.
 a) Who has the most cards? Connor b) How many cards has Jamie? 3
- 22** True or false? The largest fraction here plus the smallest fraction is equal to one whole.
 $\frac{3}{6}$ $\frac{5}{6}$ $\frac{2}{6}$ $\frac{1}{6}$ $\frac{4}{6}$ True ☒ False ☐
- 23** Jessica says that $\frac{4}{5}$ of an amount of money is always larger than $\frac{1}{5}$ of a different amount of money. Is she correct? Yes ☐ No ☒
- 24** Find $\frac{1}{5}$ of 30p and $\frac{4}{5}$ of 5p.
 Write which is larger. $\frac{1}{5}$ of 30p = 6p

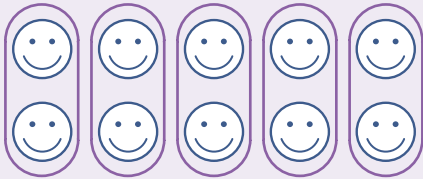


Recognise fractions of a set of objects

Key point

To find fractions of sets of objects, arrange them into **equal groups**.

To find **one-fifth** of these 10 faces, group them into **5 groups**.



$\frac{1}{5}$ (1 group) of the 10 faces is 2 faces.

$\frac{3}{5}$ (3 groups) of the 10 faces is 6 faces.

Get started

- 1** True or false? The 3 purple faces are $\frac{1}{4}$ of all the faces.

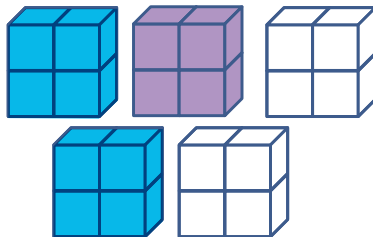
True ☒

False ☐



- 2** What fraction of the cubes are purple?

$\frac{1}{5}$

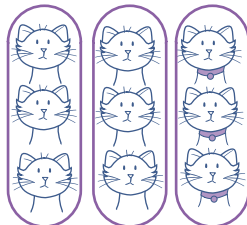


- 3** Colour some more cubes above so that now $\frac{3}{5}$ of the cubes are coloured.

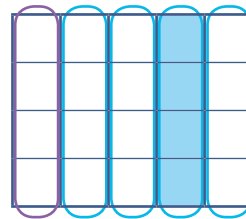
- 4** What fraction of these cats have:

a) collars? $\frac{1}{3}$

b) no collars? $\frac{2}{3}$

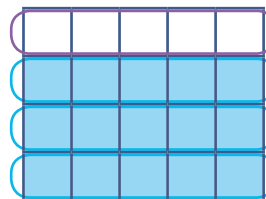


- 5** Draw more loops on this grid to show 5 equal groups.



- 6** Now colour $\frac{1}{5}$ of the squares in the grid above.

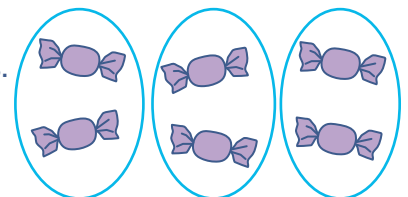
- 7** Draw more loops on this grid to show quarters.



- 8** Now colour $\frac{3}{4}$ of the squares in the grid above.

Now try these

- 9** Draw loops around the sweets to split them equally into three groups.



- 10** How many is one-third of the 6 sweets? 2

- 11** 12 grapes are arranged into 6 equal groups. How many is $\frac{1}{6}$ of the 12 grapes? 2

12 Tick which tile pattern shows $\frac{1}{6}$ purple.

13 How many equal groups are some objects sorted into to show eighths? 8

14 There are 16 beads on this necklace.
Colour $\frac{1}{8}$ of the beads.
Draw crosses on $\frac{3}{8}$ of the beads.

15 What fraction of these 8 balls are white?
 $\frac{3}{8}$

16 What fraction of these 24 balls are white?
 $\frac{3}{8}$

Challenge

17 A book has 25 pages. Lauren has read 5 pages. What fraction of the book has she:
a) read? $\frac{5}{25}$ or $\frac{1}{5}$ b) not read? $\frac{20}{25}$ or $\frac{4}{5}$

18 Colour $\frac{5}{6}$ of the 24 squares in this grid.

19 How many is $\frac{5}{6}$ of 24? 20

20 What is one-third of 30 sheep? 10

21 A bag contains 2 red apples, 6 yellow apples and 8 green apples. What fraction of the apples are:
a) red? $\frac{2}{16}$ or $\frac{1}{8}$ b) green? $\frac{8}{16}$ or $\frac{1}{2}$

22 Write the fraction of stars that are white.

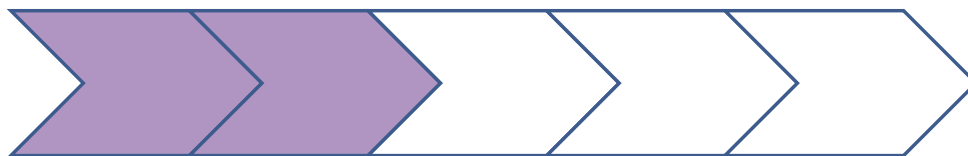
a) $\frac{2}{6}$ b) $\frac{1}{3}$

23 Zain has £1 in 1p coins. He sorts the coins into 10 equal piles. What is the value of the coins in:
a) one pile? 10 p b) three piles? 30 p

24 What is $\frac{3}{10}$ of £1? 30 p

Check-up test 2

1 What fraction of the shape is purple? $\frac{2}{5}$



1 mark

2 Write $\frac{3}{8}$ in words. three-eighths



1 mark

3 Six boys each take one-seventh of a pitta bread.

What fraction is left over? $\frac{1}{7}$



1 mark

4 $\frac{5}{9}$ $\frac{1}{9}$ $\frac{4}{9}$ $\frac{2}{9}$

Look at the fractions above. Which is:

a) the largest? $\frac{5}{9}$ b) the smallest? $\frac{1}{9}$



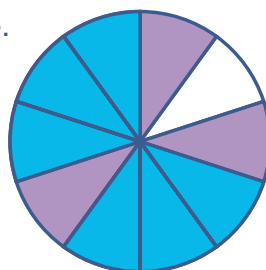
1 mark

5 What is six-tenths less than one whole? $\frac{4}{10}$



1 mark

6 Colour six more tenths of this circle.



1 mark

7 What is $2\frac{3}{10} + \frac{1}{10}$? $2\frac{4}{10}$



1 mark

8 True or false? $\frac{5}{10}$ is equal to $\frac{1}{2}$. True ☒ False ☐



1 mark

9 What is seven divided by ten, as a fraction? $\frac{7}{10}$



1 mark

10 A bag of rice is 3kg. Each jar holds $\frac{3}{10}$ kg of rice.

How many jars are needed for all the rice? 10



1 mark



- 11 Write the number shown by the arrow. $5\frac{1}{3}$



- 12 What is $\frac{1}{10}$ more than $2\frac{3}{10}$? $2\frac{4}{10}$

- 13 What is the difference between $1\frac{4}{5}$ and $1\frac{3}{5}$? $\frac{1}{5}$

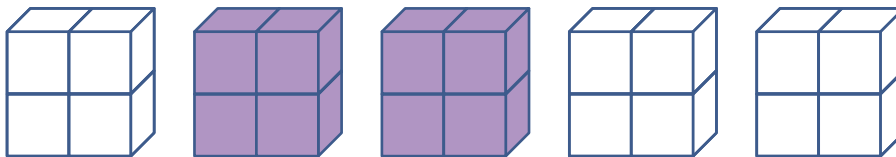
- 14 Circle the larger fraction. $\frac{4}{7}$ $\left(\frac{6}{7}\right)$

- 15 Circle the fraction that is larger than one-half. $\frac{2}{6}$ $\frac{1}{6}$ $\left(\frac{4}{6}\right)$

- 16 Adam says that $\frac{3}{4}$ of an amount of money is always larger than $\frac{1}{4}$ of a different amount of money. Is he correct?

Yes ☐ No ☒

- 17 What fraction of the cubes are purple? $\frac{2}{5}$ or $\frac{8}{20}$

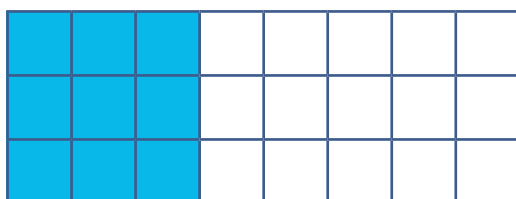


- 18 How many is one-fifth of 10 ice creams? 2

- 19 What fraction of these 8 frogs are jumping? $\frac{3}{8}$



- 20 Colour $\frac{3}{8}$ of the 24 squares in this grid.


☐

1 mark

☐

1 mark

☐

1 mark

☐

1 mark

☐

1 mark

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1 mark

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1 mark

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1 mark

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1 mark

☐

1 mark

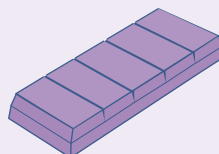
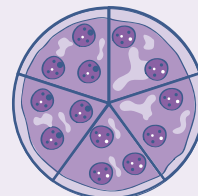
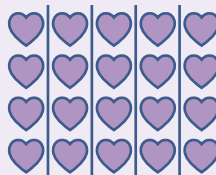
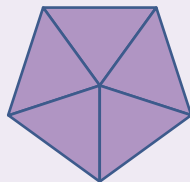
Total

20 marks

Use non-unit fractions in a variety of representations

Key point

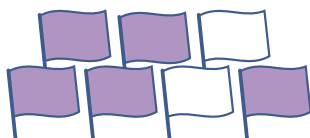
Fractions involve a **whole** being split into **equal parts**. Here different wholes are all split into 5 equal parts. Each part is one-fifth.



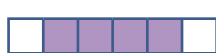
Get started

- 1 What fraction of these flags are white?

$\frac{2}{7}$

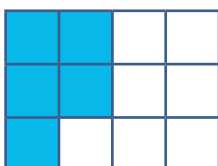


- 2 Tick the shape that is $\frac{4}{6}$ purple.



- 3 Circle the fraction made when three wholes are divided by 10. $\frac{10}{3}$ $\frac{1}{3}$ $\frac{3}{10}$

- 4 Colour five-twelfths of this shape.



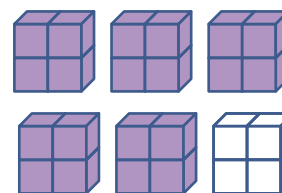
- 5 What is one-fifth of 15? 3

- 6 Draw a cross at $\frac{3}{4}$ on this line.



- 7 What fraction of the cubes are purple?

$\frac{5}{6}$ or $\frac{20}{24}$



- 8 One whole pound is split into tenths.

How much is one-tenth? 10 p

Now try these

- 9 A cake is cut into six equal slices. What fraction of the whole cake is five slices? $\frac{5}{6}$

- 10 If A stands for $\frac{1}{5}$, what does B stand for? $\frac{2}{5}$



- 11 Draw a cross on the line above to show four-fifths.

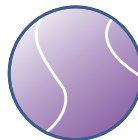
- 12 True or false? $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{3}{5}$ True ☒ False ☐

13 Which letter on the number line shows $\frac{5}{8}$? E



14 What fraction does C represent on the number line above? $\frac{3}{8}$

15 There are 4 yellow tennis balls and 3 green ones.
What fraction of the balls are green? $\frac{3}{7}$



16 A piece of string is cut into eight equal lengths.
What fraction of the whole piece of string are three of the lengths together? $\frac{3}{8}$

Challenge

17 What fraction of a week is: a) one day? $\frac{1}{7}$ b) two days? $\frac{2}{7}$

18 A group of 10 children get into pairs.
What fraction of the group is:

a) one pair? $\frac{1}{5}$ or $\frac{2}{10}$

b) four pairs? $\frac{4}{5}$ or $\frac{8}{10}$

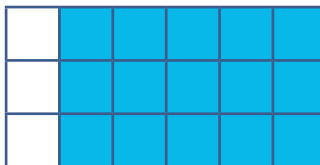


19 Jonah eats $\frac{3}{10}$ of a chocolate bar. What fraction is left? $\frac{7}{10}$

20 What fraction do you get if you divide eight by ten?

Write the answer in words. eight-tenths

21 Colour $\frac{5}{6}$ of the 18 squares in this grid.



22 How many times as long as $\frac{1}{10}$ of a kilometre is $\frac{3}{10}$ of a kilometre? 3

23 $\frac{3}{7}$ $\frac{1}{7}$ $\frac{6}{7}$ $\frac{4}{7}$

Look at the fractions above. Which of these fractions is:

a) the largest? $\frac{6}{7}$ b) the smallest? $\frac{1}{7}$

24 One-third of Macy's money is 10p.

a) How much is $\frac{2}{3}$ of her money? 20 p

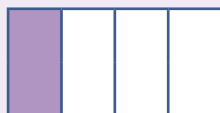
b) How much is the whole amount of her money? 30 p



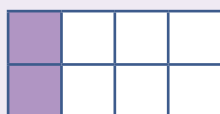
Recognise fractions showing the same amount

Key point

Parts of these two shapes are purple and white.



The first shape is $\frac{1}{4}$ purple and $\frac{3}{4}$ white.



The second shape is $\frac{2}{8}$ purple and $\frac{6}{8}$ white.

The same amount of each shape is purple. $\frac{1}{4}$ is the same amount as $\frac{2}{8}$.

The same amount of each shape is white. $\frac{3}{4}$ is the same amount as $\frac{6}{8}$.

Get started

- 1 Do these two shapes show the same amount purple?

Yes ☒

No ☐



- 5 What number is missing?

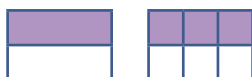
$\frac{1}{2}$ is the same amount as $\frac{3}{6}$.

- 2 How many quarters are the same as one-half? 2 quarters

- 3 Do these two shapes have the same amount purple?

Yes ☒

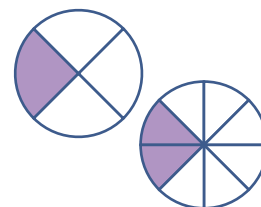
No ☐



- 6 Do these two shapes show the same amount purple?

Yes ☒

No ☐



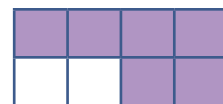
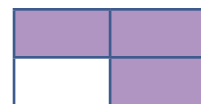
- 7 $\frac{1}{4}$ is the same amount as $\frac{2}{8}$.

- 4 One-half is the same as how many sixths? 3 sixths

- 8 How many eighths are the same amount as one-half? 4 eighths

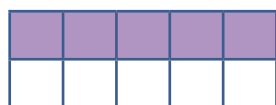
Now try these

- 9 Three-quarters is how many eighths? 6 eighths



- 10 How many tenths is the same as one-half?

$$\frac{1}{2} = \frac{5}{10}$$

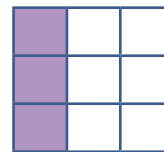
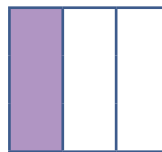


- 11 This cylinder is $\frac{3}{6}$ purple. Write another fraction to show what fraction of the cylinder is purple. $\frac{1}{2}$



- 12** Look at the shapes and write the missing numbers.

$$\frac{1}{3} \text{ is the same amount as } \frac{3}{9}.$$

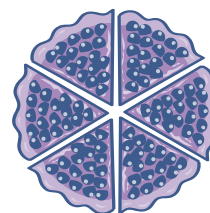


- 13** A cereal bar has 8 chunks. Kim eats one-quarter of the whole bar.

How many chunks does she eat? 2

- 14** A tart is cut into six equal slices. Aswin's family eat half of the tart.

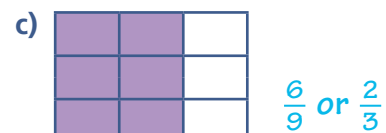
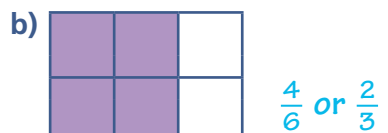
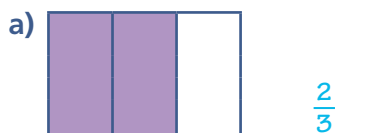
How many slices do they eat? 3



- 15** David's birthday cake is cut into equal slices.

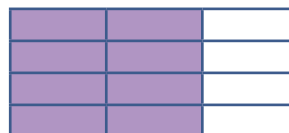
He eats $\frac{2}{8}$ of the cake. Is this more, less or the same as $\frac{1}{4}$ of the cake? the same

- 16** For each diagram, write the fraction of the shape that is purple.



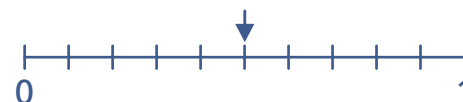
Challenge

- 17** Eight-twelfths is the same amount as how many thirds? 2 thirds



- 18** A number line shows tenths.

How many tenths are the same as one-half? 5 tenths



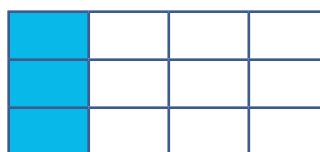
- 19** A number line is split into fifths.

How many tenths are the same as one-fifth? 2 tenths



- 20** What is the missing number? $\frac{4}{5}$ is the same as $\frac{8}{10}$.

- 21** Colour one-quarter of this rectangle.



- 22** How many twelfths have you coloured above? 3 twelfths

- 23** What fraction of the rectangle above is not coloured?

$$\frac{9}{12} = \frac{3}{4}$$

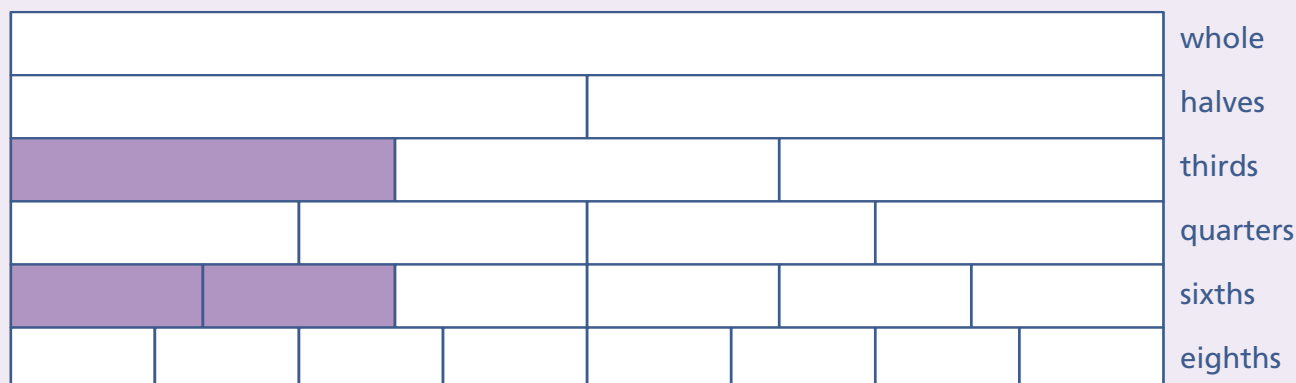
- 24** A wall is covered in tiles. $\frac{3}{12}$ of the tiles are white. $\frac{1}{4}$ of the tiles are pink.

Are there the same number of white tiles as pink tiles? Yes ☒ No ☐

Find equivalent fractions using a fraction wall

Key point

Fractions are called **equivalent** when they stand for the **same** amount.



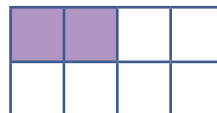
The purple bars show that $\frac{1}{3}$ and $\frac{2}{6}$ are equivalent.

Get started

- 1 Use the fraction wall to help you find how many quarters are equivalent to one-half. 2 quarters
- 2 One-half is equivalent to how many sixths? 3 sixths
- 3 One-quarter is equivalent to how many eighths? 2 eighths
- 4 One-third is equivalent to how many sixths? 2 sixths
- 5 The fraction $\frac{1}{2}$ is equivalent to how many eighths? 4 eighths
- 6 $\frac{1}{4}$ is equivalent to $\frac{2}{8}$.
- 7 $\frac{2}{3}$ is equivalent to $\frac{4}{6}$.
- 8 How many quarters are equivalent to one whole? 4 quarters

Now try these

- 9 One-quarter of this shape is purple. How many eighths is this? 2 eighths

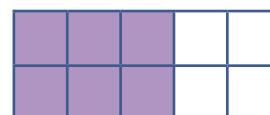


- 10 Colour one-half of these rectangles.



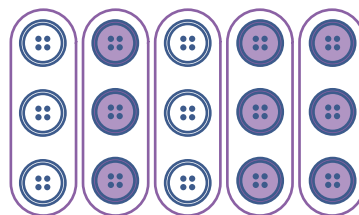
Now write the missing number. $\frac{1}{2} = \frac{3}{6}$

- 11 How many tenths are equivalent to three-fifths? $\frac{3}{5} = \frac{6}{10}$



- 12** Six of these 15 buttons are white. The buttons are grouped into fifths.

How many fifths are white? $\frac{6}{15} = \frac{2}{5}$

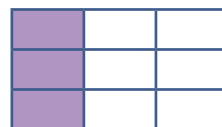


- 13** Nine of the 15 buttons are purple.

How many fifths are purple? $\frac{9}{15} = \frac{3}{5}$

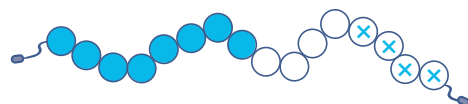
- 14** Write a fraction with the denominator 9 that is equivalent to $\frac{1}{3}$.

$\frac{1}{3} = \frac{3}{9}$



- 15** There are 16 beads on this necklace. Colour 8 of the beads.

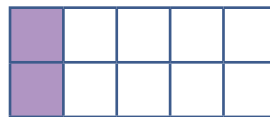
Write two equivalent fractions to show what fraction of the beads are coloured in. $\frac{8}{16}$ $\frac{1}{2}$



- 16** Now draw crosses on 4 of the beads. Write two equivalent fractions to show what fraction of the beads have crosses. $\frac{4}{16}$ $\frac{1}{4}$

Challenge

- 17** One-fifth of the grid is purple. $\frac{1}{5} = \frac{2}{10}$



- 18** Four-fifths of the grid is white. $\frac{4}{5} = \frac{8}{10}$

- 19** Some friends share a birthday cake. Olivia has $\frac{2}{8}$ of it. Brooke has $\frac{1}{4}$ of it.

Do they have the same amount? Yes ☒ No ☐

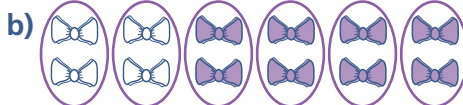


- 20** What is the missing numerator? $\frac{3}{4} = \frac{6}{8}$

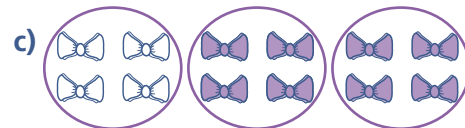
- 21** For each diagram, write the fraction of bow ties that are white.



$\frac{4}{12}$



$\frac{2}{6}$



$\frac{1}{3}$

- 22** What fraction of each set of bow ties above are purple? a) $\frac{8}{12}$ b) $\frac{4}{6}$ c) $\frac{2}{3}$

- 23** Complete this pattern. $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$

- 24** Two of these fractions are equivalent to one-half. Circle them. $\frac{2}{3}$ $\frac{5}{10}$ $\frac{3}{8}$ $\frac{4}{4}$ $\frac{4}{6}$ $\frac{6}{12}$

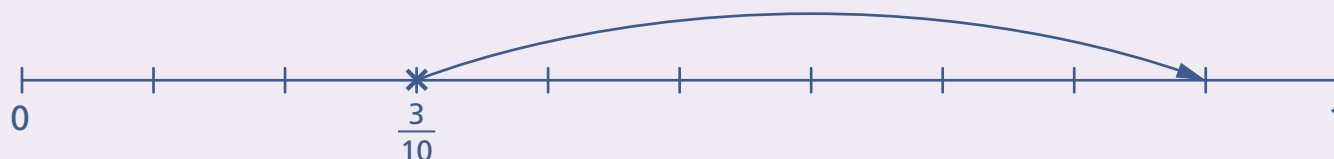
Add fractions with the same denominator

Key point

When adding fractions ask: 'Are the denominators the same?'

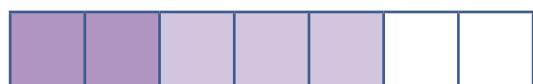
If so, add the numerators only. Use the same denominator.

$$\begin{array}{lcl} \text{numerator} & \longrightarrow & 3 + 6 = 9 \\ \text{denominator} & \longrightarrow & 10 + 10 = 10 \end{array}$$

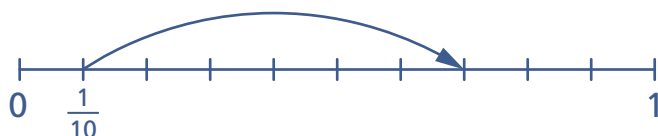


Get started

1 $\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$



2 $\frac{1}{10} + \frac{6}{10} = \frac{7}{10}$



3 $\frac{1}{8} \text{ plus } \frac{4}{8} = \frac{5}{8}$

4 Add $\frac{1}{3}$ and $\frac{1}{3}$. $\frac{2}{3}$

5 $\frac{5}{9} + \frac{3}{9} = \frac{8}{9}$

6 Double $\frac{2}{5}$. $\frac{4}{5}$

7 $\frac{1}{8} + \frac{1}{8} + \frac{3}{8} = \frac{5}{8}$

8 $\frac{4}{12} + \frac{7}{12} = \frac{11}{12}$

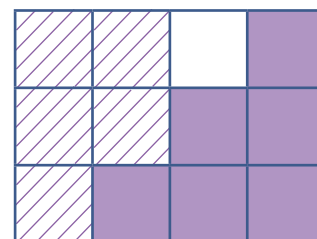
Now try these

9 Write the fraction of this shape that is:

a) $\frac{5}{12}$ b) $\frac{6}{12}$ c) or $\frac{11}{12}$

10 Count on $\frac{4}{6}$ from $\frac{1}{6}$. $\frac{5}{6}$

11 What is added to $\frac{1}{11}$ to get $\frac{9}{11}$? $\frac{8}{11}$



- 12** Increase five-sevenths by one-seventh. $\frac{6}{7}$
- 13** What is $\frac{2}{9}$ more than $\frac{5}{9}$? $\frac{7}{9}$
- 14** Find the sum of four-ninths and three-ninths. $\frac{7}{9}$
- 15** Find the total of $\frac{2}{6}$ and $\frac{3}{6}$. $\frac{5}{6}$
- 16** Give the sum of $\frac{5}{12}$ and $\frac{7}{12}$ as a whole number. 1

Challenge

- 17** $\frac{1}{10}$ m is added to $\frac{6}{10}$ m. What fraction of a metre is still required to make 1 metre? $\frac{3}{10}$ m

- 18** Find the values of a and b .
 $\frac{1}{10} + \frac{4}{10} = \frac{a}{10} = \frac{1}{b}$ $a = 5$ $b = 2$

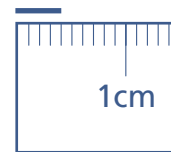
- 19** Amina mixes one-quarter of a kilogram of sugar with two-quarters of a kilogram of flour.

How many grams is the total mixture? 750 g



- 20** How many quarters are equivalent to the sum of $\frac{1}{8}$, $\frac{3}{8}$ and $\frac{2}{8}$? 3 quarters

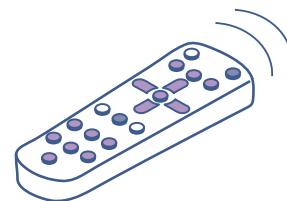
- 21** A line is 0.4cm. What is the length of another line that is three-tenths of a centimetre longer? Give your answer as a fraction. $\frac{7}{10}$ cm



- 22** Ollie spent $\frac{1}{6}$ of an hour watching a cartoon and $\frac{2}{6}$ of an hour watching a quiz show.

a) For what fraction of an hour did he watch altogether? $\frac{3}{6}$ or $\frac{1}{2}$ hr

b) How many minutes is this? 30 min



- 23** Write the answer to $\frac{1}{12} + \frac{5}{12}$ as a fraction with the numerator 1. $\frac{1}{2}$

- 24** Which two different fractions with the denominator 10 have a total that is equivalent to two-fifths?

$$\frac{1}{10} + \frac{3}{10} = \frac{2}{5}$$

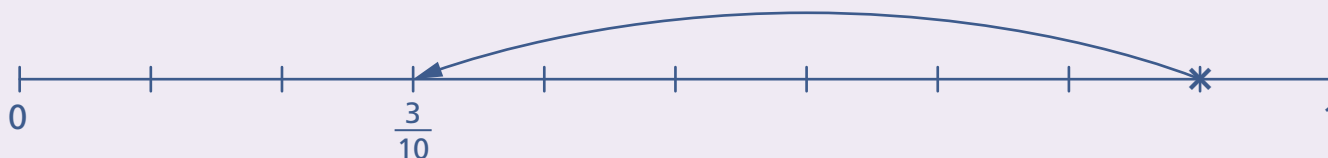
Subtract fractions with the same denominator

Key point

When subtracting fractions ask: 'Are the denominators the same?'

If so, **subtract the numerators only**. Use the **same denominator**.

$$\begin{array}{lcl} \text{numerator} & \longrightarrow & \frac{9}{10} - \frac{6}{10} = \frac{3}{10} \\ \text{denominator} & \longrightarrow & \end{array}$$



Get started

1 $\frac{6}{7} - \frac{3}{7} = \frac{3}{7}$



2 $\frac{8}{10} - \frac{1}{10} = \frac{7}{10}$



3 $\frac{7}{8} \text{ minus } \frac{4}{8} = \frac{3}{8}$

4 Subtract $\frac{1}{3}$ from $\frac{2}{3}$. $\frac{1}{3}$

5 $\frac{5}{9} - \frac{3}{9} = \frac{2}{9}$

6 $\frac{8}{8} - \frac{1}{8} = \frac{7}{8}$

7 Take $\frac{2}{5}$ from one whole. $\frac{3}{5}$

8 $\frac{9}{12} - \frac{7}{12} = \frac{2}{12}$

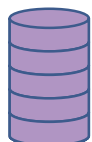
Now try these

9 Decrease five-sevenths by one-seventh. $\frac{4}{7}$

10 Count back $\frac{4}{6}$ from $\frac{5}{6}$. $\frac{1}{6}$

11 What is subtracted from $\frac{9}{11}$ to get $\frac{1}{11}$? $\frac{8}{11}$

12 What is $\frac{5}{5}$ minus $\frac{2}{5}$? $\frac{3}{5}$



13 What is $\frac{2}{9}$ less than $\frac{7}{9}$? $\frac{5}{9}$

14 Find the difference between four-ninths and three-ninths. $\frac{1}{9}$

15 A bag of flour weighs $\frac{8}{10}$ kg. Kyle uses $\frac{3}{10}$ kg of the flour to make a cake.

a) What fraction of a kilogram is left? $\frac{5}{10}$ or $\frac{1}{2}$ kg

b) How many grams is this? **500** g

16 Zoë walks $\frac{3}{8}$ of the way to school. What fraction is left to walk? $\frac{5}{8}$



Challenge

17 Maria spent $\frac{7}{12}$ of an hour listening to music. For $\frac{1}{12}$ of an hour she listened to hip hop and for the rest of the time she listened to jazz.

a) For what fraction of an hour did she listen to jazz? $\frac{6}{12}$ or $\frac{1}{2}$ hr

b) How many minutes is this? **30** min



18 Find the values of a and b .

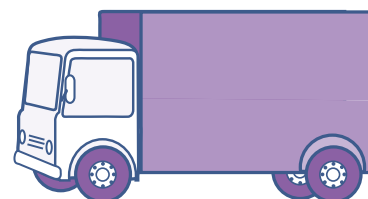
$$\frac{9}{10} - \frac{7}{10} = \frac{a}{10} = \frac{1}{b} \quad a = \mathbf{2} \quad b = \mathbf{5}$$

19 Write the answer to $\frac{11}{12} - \frac{5}{12}$ as a fraction with the numerator 1. $\frac{1}{2}$

20 A lorry driver has to travel from one city to another. He drives $\frac{3}{9}$ of the distance before lunch and finishes his journey after lunch.

a) What fraction of the way does he drive after lunch? $\frac{6}{9}$

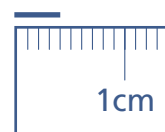
b) How many thirds of the distance is this? **2** thirds



21 $\frac{3}{6} \quad \frac{5}{6} \quad \frac{2}{6} \quad \frac{1}{6} \quad \frac{4}{6}$

What is the largest fraction minus the smallest fraction? $\frac{4}{6}$ or $\frac{2}{3}$

22 A line is 0.4 cm. What is the length of another line that is three-tenths of a centimetre shorter? Give your answer as a fraction. $\frac{1}{10}$ cm



23 Only $\frac{7}{12}$ of the seats for a football match were sold.

Some of the seats were sold to women, $\frac{4}{12}$ were sold to men and $\frac{2}{12}$ to children.

What fraction of the seats were sold to women? $\frac{1}{12}$



24 $1 - \frac{3}{7} + \frac{2}{7} - \frac{4}{7} = \frac{\mathbf{2}}{\mathbf{7}}$

Solve problems with measures

Key point

Fractions can be used to show parts of a whole **unit of measurement** such as a kilogram, a metre, a litre or a centimetre.

For example: $\frac{1}{4}$ kg or $\frac{3}{10}$ cm

Whole numbers and fractions can be used together (as **mixed numbers**) to show measurements larger than one unit.

For example: $3\frac{1}{2}$ kg or $5\frac{7}{10}$ cm

When using tenths, a **decimal** can be used.

For example: $5\frac{7}{10}$ cm = 5.7 cm


Get started

1 Write two and three-quarter centimetres in digits. $2\frac{3}{4}$ cm

2 Write this measurement in words: $6\frac{1}{2}$ kg.
six and a half kilograms

3 How many quarters of a kilogram are in 2 kilograms?
8 quarters

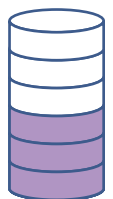
4 Write two-fifths of a metre in digits.
 $\frac{2}{5}$ m



5 What length is $\frac{3}{8}$ m more than 3m?
 $3\frac{3}{8}$ m

6 What capacity is $\frac{1}{4}$ litre more than 4 litres? $4\frac{1}{4}$ l

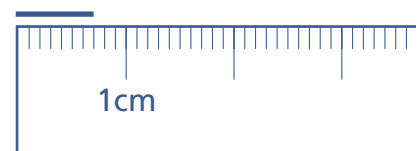
7 True or false? $\frac{3}{6}$ litre = $\frac{1}{2}$ litre
True ☒ False ☐



8 How many grams in $\frac{1}{2}$ kg? 500 g

Now try these

9 This line is 0.7cm.
Write its length as a fraction of a centimetre. $\frac{7}{10}$ cm



10 How many tenths of a centimetre make half a centimetre? 5 tenths

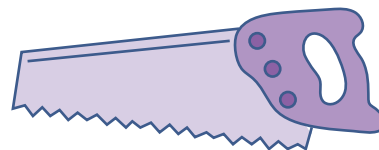
11 A metre is divided into 10 equal parts. How many centimetres is the same as $\frac{3}{10}$ m? 30 cm

- 12** How many minutes is:
 a) $\frac{1}{4}$ hour? 15 min b) $\frac{1}{2}$ hour? 30 min c) $1\frac{1}{2}$ hours? 90 min

- 13** What length of time is $\frac{1}{4}$ hour plus $1\frac{1}{4}$ hours? $1\frac{1}{2}$ hr

- 14** A 1m plank of wood is sawn into six equal lengths.

What fraction of a metre is each length? $\frac{1}{6}$ m



- 15** A tap pours $\frac{1}{10}$ litre of water every second.

How many litres will it pour in 60 seconds? 6 l

- 16** Write five-tenths of a centimetre as a decimal. 0.5 cm

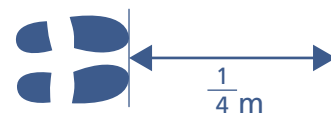
Challenge

- 17** Circle the heaviest mass. $4\frac{5}{8}$ kg $3\frac{1}{3}$ kg $4\frac{7}{8}$ kg

- 18** Find the difference in grams between $\frac{1}{4}$ of 32g and $\frac{1}{8}$ of 48g. 2 g

- 19** As he walks, each of Omar's steps is $\frac{1}{4}$ m apart.

If he takes 9 steps, how far from the start has he walked? $2\frac{1}{4}$ m



- 20** What is one-eighth of a litre less than 2 litres? $1\frac{7}{8}$ l

- 21** The length of a rectangle is 9cm. Its width is $\frac{1}{3}$ of its length.

Find the perimeter of the rectangle. 24 cm

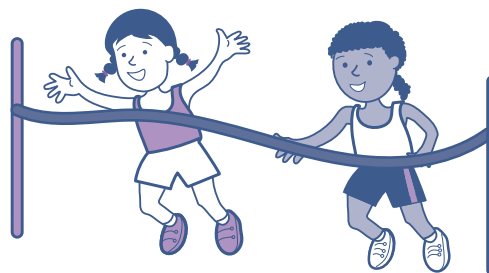
- 22** Some square cards have sides that are each $\frac{1}{10}$ of a metre.

How long is a line of 19 touching cards, in metres? $1\frac{9}{10}$ m

- 23** Lily ran a race in $10\frac{1}{2}$ seconds.

Keira took two-tenths of a second longer.

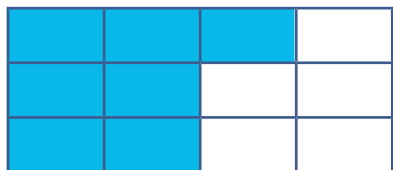
How long did Keira take? $10\frac{7}{10}$ sec



- 24** How many centimetres less than 1 metre is nine-tenths of a metre? 10 cm

Check-up test 3

- 1 Colour seven-twelfths of this shape.



☐
1 mark

- 2 What is one-sixth of 18? 3

☐
1 mark

- 3 There are 5 purple socks and 4 white socks.

What fraction of the socks are white? $\frac{4}{9}$



☐
1 mark

- 4 $\frac{1}{5}$ of Theo's money is 20p.

a) How much is $\frac{2}{5}$ of his money? 40 p

b) How much is the whole amount of his money? £ 1

☐
1 mark

- 5 $\frac{1}{3}$ is the same amount as $\frac{2}{6}$.

☐
1 mark

- 6 A number line shows tenths. How many tenths is the same as one-fifth?

2 tenths



☐
1 mark

- 7 One-half is equivalent to how many eighths? 4 eighths

☐
1 mark

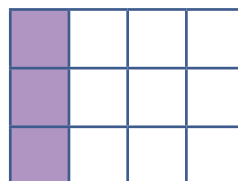
- 8 Some friends share an orange. Emily has $\frac{3}{12}$. Max has $\frac{1}{3}$ of it.

Do they have the same amount? Yes ☐ No ☒

☐
1 mark

- 9 One-quarter is purple. How many twelfths is this?

3 twelfths

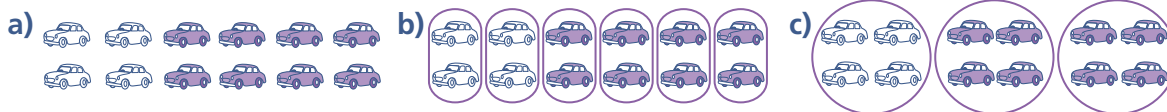


☐
1 mark

- 10 $\frac{1}{10} + \frac{8}{10} = \frac{9}{10}$

☐
1 mark

11 For each diagram, write the fraction of toy cars that are purple.



$$\frac{8}{12}$$

=

$$\frac{4}{6}$$

=

$$\frac{2}{3}$$

12 Find the difference between two-sevenths and six-sevenths. $\frac{4}{7}$

13 $\frac{1}{10}$ m is added to $\frac{2}{10}$ m.

What fraction of a metre is still required to make 1 metre? $\frac{7}{10}$ m

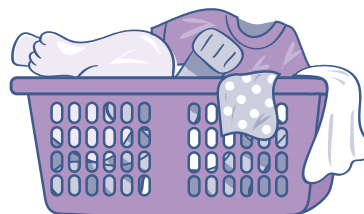
14 Subtract $\frac{1}{5}$ from $\frac{3}{5}$. $\frac{2}{5}$

15 Nadia eats $\frac{2}{9}$ of an apple. What fraction is left? $\frac{7}{9}$

16 A box of washing powder weighs $\frac{7}{10}$ kg.
Thomas uses $\frac{2}{10}$ kg to do the laundry.

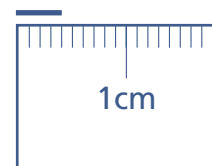
a) What fraction of a kilogram is left? $\frac{5}{10}$ or $\frac{1}{2}$ kg

b) How many grams is this? 500 g



17 Write this measurement in words: $5\frac{1}{4}$ kg five and a quarter kilograms

18 This line is 0.4cm. Write its length as a fraction of a centimetre.
 $\frac{4}{10}$ cm



19 A hosepipe pours $\frac{1}{5}$ litre of water every second.

How many litres will it pour in 60 seconds? 12 l

20 How many centimetres less than 1 metre is seven-tenths of a metre? 30 cm

☐ 1 mark

☐ 1 mark

☐ 1 mark

☐ 1 mark

☐ 1 mark

☐ 1 mark

☐ 1 mark

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☐ 1 mark

Total

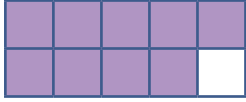
20 marks

Final test

Section 1

1

What fraction of the whole shape is purple? $\frac{9}{10}$



1 mark

2

Write the next two numbers in the sequence.

$5\frac{4}{10}$, $5\frac{5}{10}$, $5\frac{6}{10}$, $5\frac{7}{10}$, $5\frac{8}{10}$, $5\frac{9}{10}$, 6

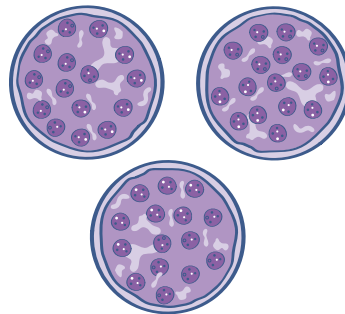


1 mark

3

Three pizzas are equally shared between 10 people.

What fraction of a pizza does each get? $\frac{3}{10}$



1 mark

4

$7\text{kg} \div 10 = \frac{7}{10}\text{kg}$



1 mark

Section 2

5

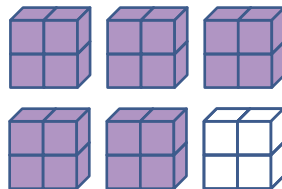
What fraction of these pencil sharpeners are white? $\frac{1}{5}$



1 mark

6

What fraction of the cubes are purple? $\frac{5}{6}$ or $\frac{20}{24}$



1 mark

7

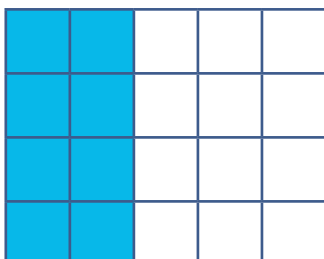
What is one-quarter of 8 peanuts? 2



1 mark

8

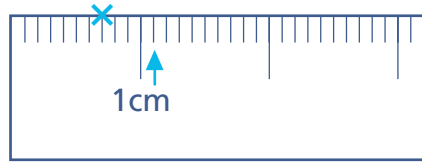
Colour $\frac{2}{5}$ of the 20 squares in this grid.



1 mark

Section 3

- 9** This ruler shows tenths of a centimetre.
Mark $\frac{7}{10}$ cm with a cross and $1\frac{1}{10}$ cm with an arrow on this ruler.



☐ 1 mark

- 10** What number is the arrow showing?
 $7\frac{3}{4}$



☐ 1 mark

- 11** What fraction is the answer to $1 \div 5$? $\frac{1}{5}$

☐ 1 mark

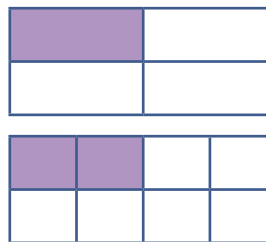
- 12** Mark the number $2\frac{2}{3}$ on this line with a cross.



☐ 1 mark

Section 4

- 13** One-quarter is how many eighths?
2 eighths



☐ 1 mark

- 14** $\frac{2}{3}$ is equivalent to $\frac{6}{9}$.

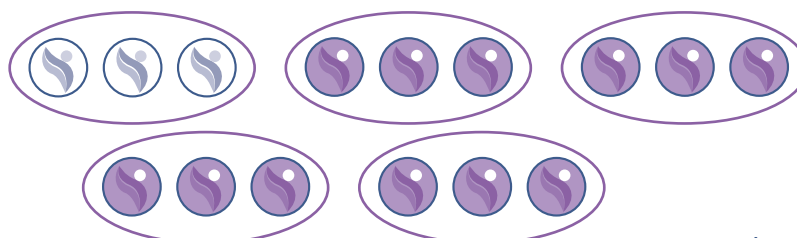
☐ 1 mark

- 15** Circle the fractions that are equivalent to one-half.

$\frac{2}{3}$ $\frac{5}{10}$ $\frac{3}{6}$ $\frac{4}{4}$ $\frac{4}{6}$ $\frac{6}{12}$

☐ 1 mark

- 16** $\frac{3}{15} = \frac{1}{5}$



☐ 1 mark

please turn over

Section 5

17 What is two-sevenths more than three-sevenths? $\frac{5}{7}$

☐
1 mark

18 Decrease two-thirds by one-third. $\frac{1}{3}$

☐
1 mark

19 $\frac{1}{8} + \frac{1}{8} + \frac{5}{8} = \frac{7}{8}$

☐
1 mark

20 $\frac{11}{12} - \frac{4}{12} = \frac{7}{12}$

☐
1 mark

Section 6

21 Is one-sixth of a kilogram more or less than one-quarter of a kilogram? *less*

☐
1 mark



22 Tick to show how the fractions in this sequence are ordered:

$\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$

smallest to largest ☒

largest to smallest ☐

☐
1 mark

23 Use either the < or > sign to show which is larger.

$\frac{5}{7}$ $>$ $\frac{3}{7}$

☐
1 mark

24 Write these fractions from smallest to largest:

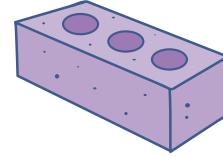
$\frac{4}{10}$ $\frac{2}{10}$ $\frac{5}{10}$ $\frac{3}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$

☐
1 mark

Section 7

- 25** 10 bricks weigh 9kg in total. What does one brick weigh?

Give your answer as a fraction of a kilogram. $\frac{9}{10}$ kg


☐

1 mark

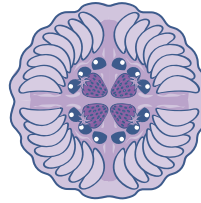
- 26** A bag contains 2 red apples, 6 yellow apples and some green apples. There are 16 apples in the bag.

What fraction of the apples are green? $\frac{8}{16}$ or $\frac{1}{2}$

☐

1 mark

- 27** A tart was cut into 9 equal slices. Leo ate $\frac{4}{9}$ of it and James ate the rest.



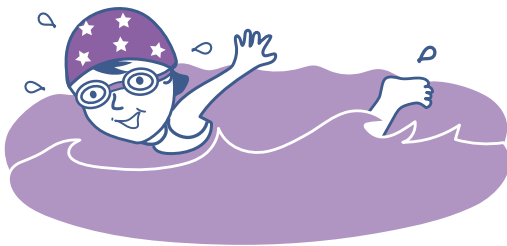
a) Who ate more? James

b) How much more did he eat as a fraction of the whole pie? $\frac{1}{9}$

☐

1 mark

- 28** Jo swam a race in $8\frac{1}{2}$ seconds. Molly took three-tenths of a second longer. How long did Molly take? $8\frac{8}{10}$ sec


☐

1 mark

Total

28 marks

End of test