

Year 3 Maths - 15.06.20

LO: Unit and non-unit fractions

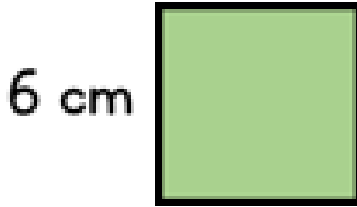
You can watch the Tutorial White Rose video here:

<https://vimeo.com/418151464>

This week we are revising Fractions – Understanding fractions is a highly useful skill to possess as we move forward in our Maths learning.

Day 1 Starter:

- 1) Calculate the perimeter of the square.



- 2) Add 12 cm and 45 cm.

- 3) What unit of measurement is best to measure the length of your thumb?

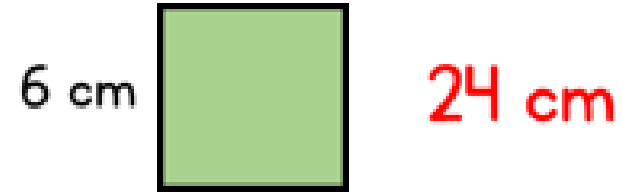
centimetres millimetres metres

- 4) Write 17 using tally marks.

Day 1 Starter

Answers:

1) Calculate the perimeter of the square.



2) Add 12 cm and 45 cm. 57 cm

3) What unit of measurement is best to measure the length of your thumb?

centimetres millimetres metres

4) Write 17 using tally marks. |||| - ||| - ||| ||

MAIN TASK SHEET

1 Write fractions to complete the sentences.



- a) of the counters are yellow.
- b) of the counters are red.

Remember, the **total number of parts** is the **denominator** (the bottom number).

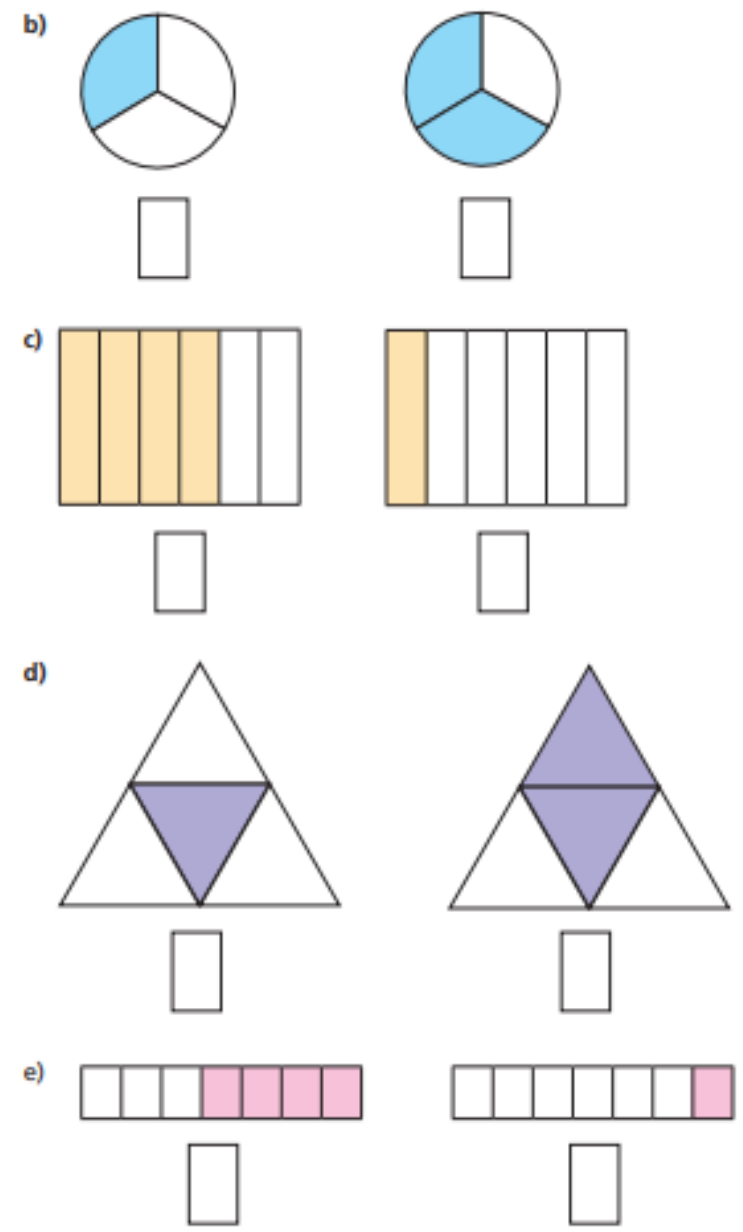
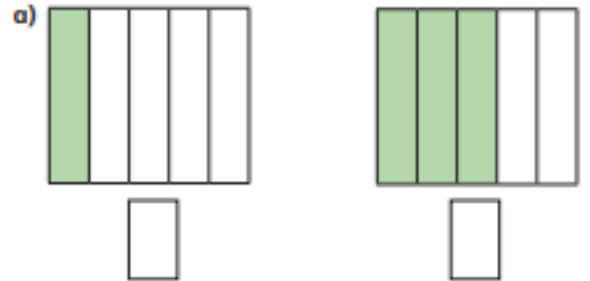
The parts of the whole you're looking at is the **numerator** (the top number).

2 Write fractions to complete the sentences.

- a) of the tower is green.
- b) of the tower is yellow.
- c) of the tower is blue.



3 What fraction of each shape is shaded?



What's the **difference** between a **unit fraction** and a **non-unit fraction**?

A **unit fraction** always has '1' as the **numerator**...

Whereas a **non-unit fraction** can have **any whole number besides '1'** as the **numerator**.

Tick the unit fraction in each pair of shapes.
How did you know which was the unit fraction?

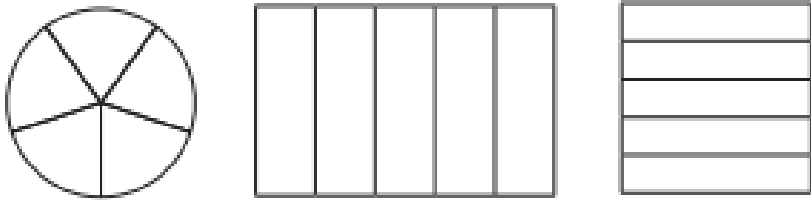
EXTENSION SHEET



4 a) Colour $\frac{1}{5}$ of each shape.

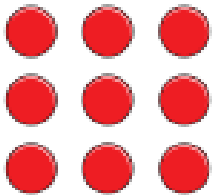


b) Colour $\frac{3}{5}$ of each shape.

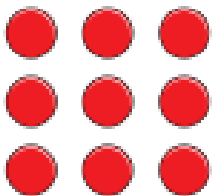


What is the same and what is different about your answers?

5 a) Circle $\frac{1}{3}$ of the counters.



b) Circle $\frac{2}{3}$ of the counters.



What is the same and what is different about your answers?

6 Write the fractions in the table.



Unit fractions	Non-unit fractions

Write two more examples of your own in each column.

7 a) What is a unit fraction? What is a non-unit fraction?

Talk about it with a partner.

b) Complete the sentences.

An example of a unit fraction is

The numerator is always

An example of a non-unit fraction is

The numerator is always greater than

Answers:

Unit and non-unit fractions

White Rose Maths

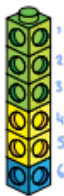
1 Write fractions to complete the sentences.



a) $\frac{1}{3}$ of the counters are yellow.

b) $\frac{2}{3}$ of the counters are red.

2 Write fractions to complete the sentences.

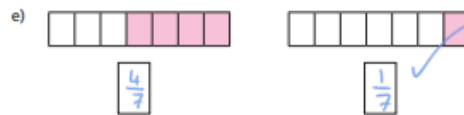
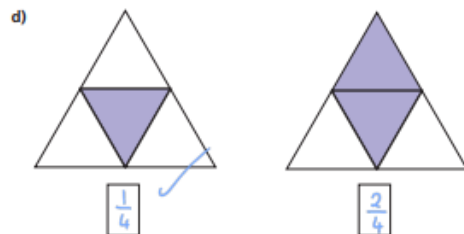
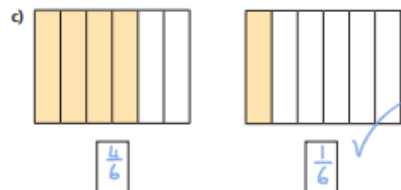
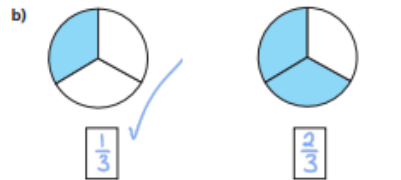
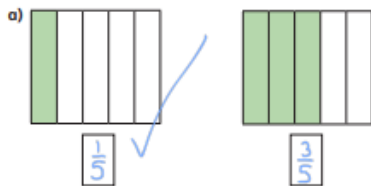


a) $\frac{3}{6}$ of the tower is green.

b) $\frac{2}{6}$ of the tower is yellow.

c) $\frac{1}{6}$ of the tower is blue.

3 What fraction of each shape is shaded?



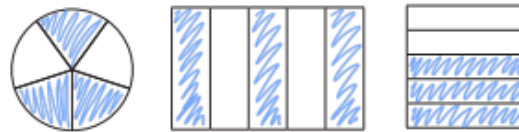
Tick the **unit fraction** in each pair of shapes.
How did you know which was the unit fraction?

© White Rose Maths

4 a) Colour $\frac{1}{5}$ of each shape.



b) Colour $\frac{3}{5}$ of each shape.



What is the same and what is different about your answers?

5 a) Circle $\frac{1}{3}$ of the counters.



b) Circle $\frac{2}{3}$ of the counters.



What is the same and what is different about your answers?

6 Write the fractions in the table.

$\frac{1}{6}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{1}{10}$	$\frac{1}{8}$
$\frac{3}{5}$	$\frac{1}{4}$	$\frac{1}{99}$	$\frac{6}{1}$	$\frac{1}{250}$

Unit fractions					Non-unit fractions				
$\frac{1}{6}$	$\frac{1}{4}$	$\frac{1}{99}$	$\frac{1}{10}$	$\frac{1}{8}$	$\frac{1}{250}$	$\frac{3}{5}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{6}{1}$

Write two more examples of your own in each column.

7 a) What is a unit fraction? What is a non-unit fraction?

Talk about it with a partner.

b) Complete the sentences.

An example of a unit fraction is $\frac{1}{9}$

The numerator is always 1

An example of a non-unit fraction is $\frac{2}{9}$

The numerator is always greater than 1

Year 3 Maths - 16.06.20

LO: Making the whole

You can watch the Tutorial White Rose video here:

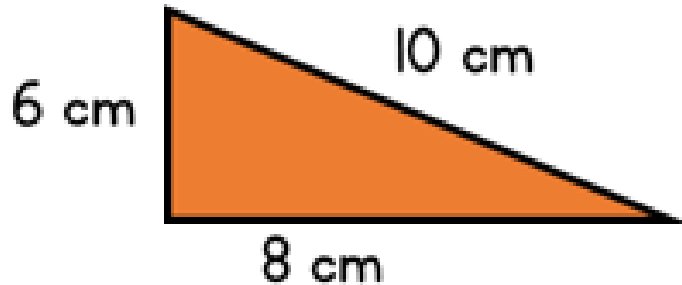
<https://vimeo.com/418151644>

Day 2 Starter:

1) What fraction of the shape is shaded?



2) Work out the perimeter of the triangle.



3) Complete: _____ millimetres = 7 centimetres

4) What is 28 divided by 4?

Day 2 Starter

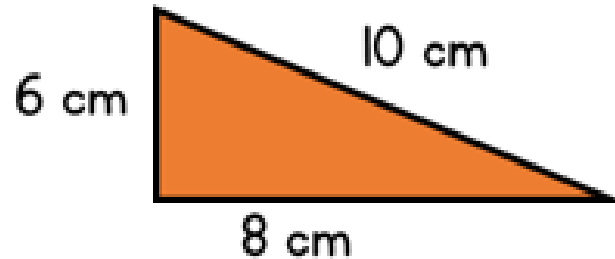
Answers:

1) What fraction of the shape is shaded?



$\frac{2}{5}$

2) Work out the perimeter of the triangle.



24 cm

3) Complete: 70 millimetres = 7 centimetres

4) What is 28 divided by 4? 7

MAIN TASK SHEET

1 Here are some counters.



a) What fraction of the counters are yellow?

b) What fraction of the counters are red?

c) Complete the number sentence.

$$\boxed{} + \boxed{} = \boxed{}$$

2 Here is a tower of cubes.



a) What fraction of the tower is green?

b) What fraction of the tower is blue?

c) Complete the number sentence.

$$\boxed{} + \boxed{} = \boxed{}$$

3 What fraction of each shape is shaded?

Which fraction represents a whole?

Fill in the missing fractions.

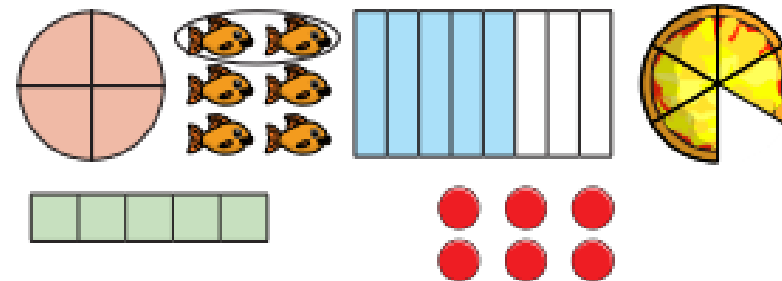
a)

= one whole

b)

= one whole

4 Here are some pictures.



Use the pictures to help you answer the questions.

a) Write three fractions that are less than one whole.

Remember, the whole is a **complete set of parts**.

For example, if you have shared a cake into 4 slices – you need all 4 slices to make the whole.

b) Write three fractions that are equal to one whole.

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What do you notice? Talk about it with a partner.



5 Choose a phrase to complete the sentences.

greater than	less than	equal to
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When the numerator is _____ the denominator, the fraction is less than one whole.

When the numerator is _____ the denominator, the fraction is equal to one whole.

6 Circle the fractions that are equivalent to one whole

$\frac{3}{5}$	$\frac{4}{4}$	$\frac{6}{10}$	$\frac{2}{2}$
$\frac{10}{10}$	$\frac{8}{9}$	$\frac{3}{3}$	$\frac{5}{5}$

7 Here are $\frac{1}{3}$ of Jack's marbles.

--	--	--	--

Draw the rest of Jack's marbles in the bar model.



EXTENSION SHEET

8 $\frac{2}{7}$ of a group of children are girls.

--	--	--	--	--	--	--

What fraction are boys?

	are boys.
--	-----------

9 Each bar model is worth one whole.

Split the bar model and label the missing fractions.

$\frac{1}{4}$	
---------------	--

$\frac{1}{5}$	$\frac{1}{5}$	
---------------	---------------	--

$\frac{7}{10}$	
----------------	--

10 Complete the number sentences.

a) $\frac{3}{5} + \square = 1$

c) $\square = \frac{2}{7} + \frac{5}{7}$

b) $\square + \frac{4}{10} = 1$

d) $\frac{9}{9} = \square + \frac{5}{9}$

Answers

Making the whole



1 Here are some counters.



a) What fraction of the counters are yellow?

$$\frac{3}{5}$$

b) What fraction of the counters are red?

$$\frac{2}{5}$$

c) Complete the number sentence.

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

2 Here is a tower of cubes.



a) What fraction of the tower is green?

$$\frac{3}{5}$$

b) What fraction of the tower is blue?

$$\frac{2}{5}$$

c) Complete the number sentence.

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

3 What fraction of each shape is shaded?

Which fraction represents a whole?

Fill in the missing fractions.

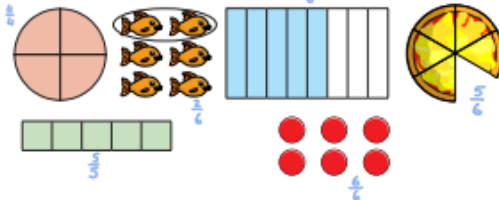
a)

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

b)

$\frac{1}{2}$ $\frac{2}{2}$ = one whole

4 Here are some pictures.



Use the pictures to help you answer the questions.

a) Write three fractions that are less than one whole.

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

b) Write three fractions that are equal to one whole.

$$\frac{6}{6}, \frac{6}{6}, \frac{6}{6}$$

What do you notice? Talk about it with a partner.

5 Choose a phrase to complete the sentences.

greater than less than equal to

When the numerator is less than the denominator, the fraction is less than one whole.

When the numerator is equal to the denominator, the fraction is equal to one whole.

6 Circle the fractions that are equivalent to one whole



7 Here are $\frac{1}{3}$ of Jack's marbles.



Draw the rest of Jack's marbles in the bar model.

8 $\frac{2}{7}$ of a group of children are girls.

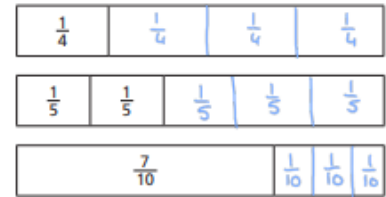


What fraction are boys?

$$\frac{5}{7}$$
 are boys.

9 Each bar model is worth one whole.

Split the bar model and label the missing fractions.



10 Complete the number sentences.

a) $\frac{3}{5} + \frac{2}{5} = 1$

c) $\frac{1}{4} + \frac{3}{4} = \frac{4}{4} = 1$ (Note: This is the same as one whole.)

b) $\frac{6}{10} + \frac{4}{10} = 1$

d) $\frac{9}{9} = \frac{9}{9} = 1$

Year 3 Maths - 17.06.20

LO: Tenths

You can watch the Tutorial White Rose video here:

<https://vimeo.com/418151919>

Day 3 Starter:

1) What fraction of the shape is shaded?



2) Subtract 43 cm from 1 m.

3) Compare using $<$, $>$ or $=$

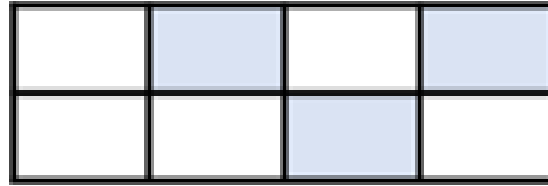
35 mm \bigcirc 10 cm

4) Add £3 and 45p to £2 and 54p.

Day 3 Starter

Answers:

- 1) What fraction of the shape is shaded?



$\frac{3}{8}$

- 2) Subtract 43 cm from 1 m. **57 cm**

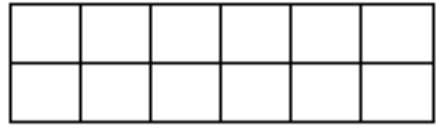
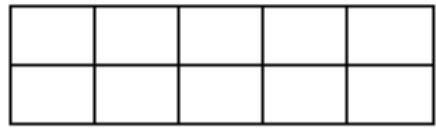
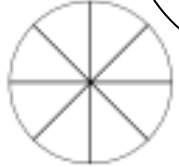
- 3) Compare using $<$, $>$ or $=$

35 mm $<$ 10 cm

- 4) Add £3 and 45p to £2 and 54p. **£5 and 99 p**

MAIN TASK SHEET

1 Tick the pictures that show tenths.



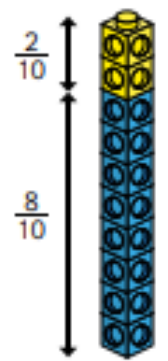
Remember, when looking at tenths you need to **divide by 10**.

2 Write fractions to complete the sentences.



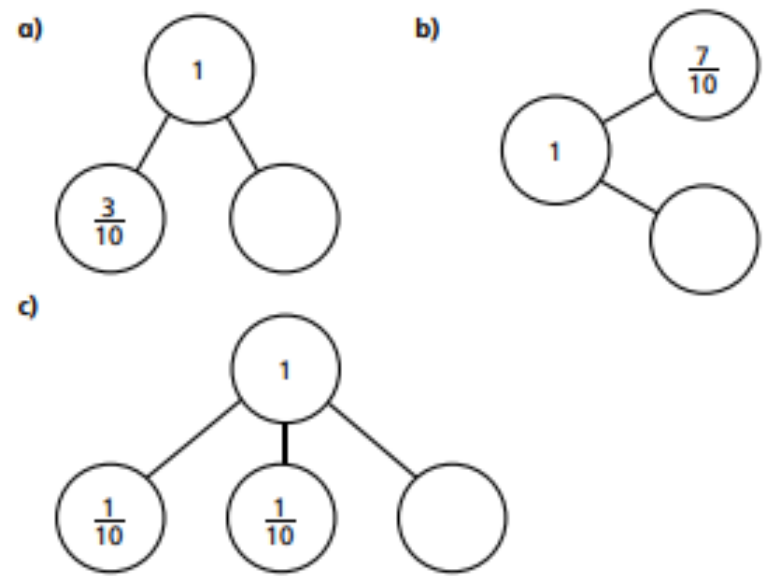
- a) of the counters are yellow.
- b) of the counters are red.
- c) of the counters are green.

3 Amir has some blue and yellow cubes. He makes a tower using 10 cubes.



Investigate how many different towers Amir can make with 10 cubes, if every tower has a different fraction of blue and yellow cubes.

4 Complete the part-whole models.



In a part-whole model, you need to **add the two parts together to find the whole**.

EXTENSION SHEET



7 Dani has a bag of sweets.

$\frac{1}{2}$ of the sweets are red.

$\frac{3}{10}$ of the sweets are yellow.

The rest are green.

What fraction of the sweets are green?

8 Mo also has a bag of sweets.

$\frac{4}{10}$ of his sweets are red.

The rest are green or yellow.

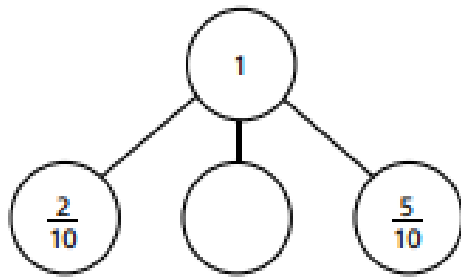
What fraction of Mo's sweets could be green?

What fraction could be yellow?

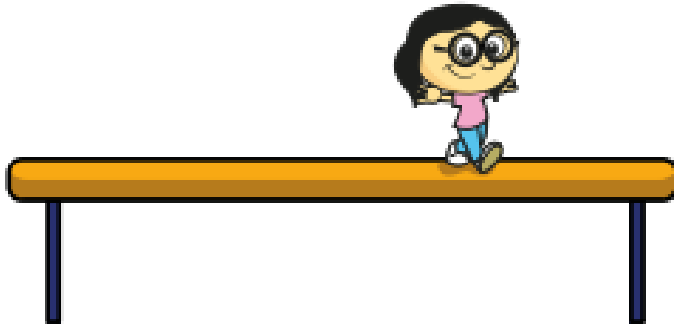
How many possible answers can you find?

Compare answers with a partner.

d)

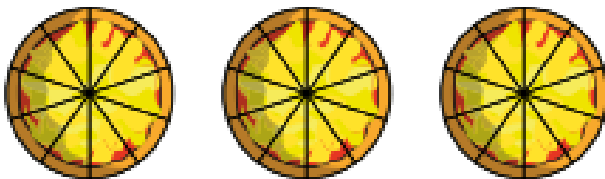


5 Annie has travelled $\frac{7}{10}$ of the way across a balance beam.



How many tenths does she have left to travel?

6 10 boys share 3 pizzas equally.



What fraction of a pizza do they each get?

Answers

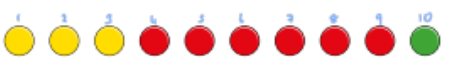
Tenths



1 Tick the pictures that show tenths.

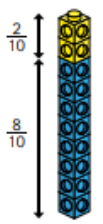
The first grid has 3 columns shaded. The second grid has 6 columns shaded. The third grid has 1 column shaded. The circle has 2 sectors shaded. The flowers have 3 yellow, 3 blue, and 4 red. The number line has 10 points, with 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 marked.

2 Write fractions to complete the sentences.

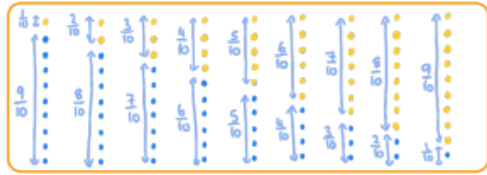


- a) $\frac{3}{10}$ of the counters are yellow.
- b) $\frac{6}{10}$ of the counters are red.
- c) $\frac{1}{10}$ of the counters are green.

3 Amir has some blue and yellow cubes. He makes a tower using 10 cubes.



Investigate how many different towers Amir can make with 10 cubes, if every tower has a different fraction of blue and yellow cubes.

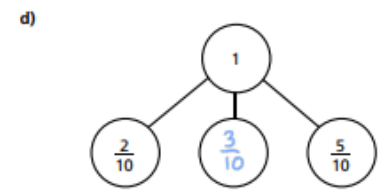


4 Complete the part-whole models.

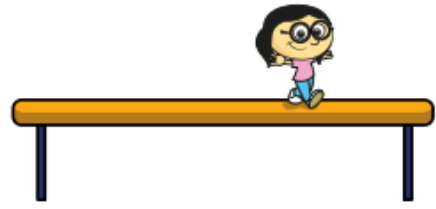
a)

b)

c)



5 Annie has travelled $\frac{7}{10}$ of the way across a balance beam.



How many tenths does she have left to travel?

$\frac{3}{10}$

6 10 boys share 3 pizzas equally.



What fraction of a pizza do they each get?

$\frac{3}{10}$

7 Dani has a bag of sweets. $\frac{1}{2}$ of the sweets are red. $\frac{3}{10}$ of the sweets are yellow. The rest are green.



What fraction of the sweets are green?



$\frac{2}{10}$

8 Mo also has a bag of sweets.

$\frac{4}{10}$ of his sweets are red. The rest are green or yellow.



What fraction of Mo's sweets could be green?

$\frac{1}{10}$

What fraction could be yellow?

$\frac{3}{10}$

How many possible answers can you find?

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

Yellow $\frac{4}{10}$ $\frac{3}{10}$ $\frac{2}{10}$ $\frac{1}{10}$

Compare answers with a partner.

Year 3 Maths - 18.06.20

LO: Count in Tenths

You can watch the Tutorial White Rose video here:

<https://vimeo.com/418153490>

Day 4 Starter:

1) How many fifths make one whole?

2) Find the perimeter of the rectangle.



3) How many metres are equal to 400 centimetres?

4) How much money is there altogether?



Day 4 Starter

Answers:

1) How many fifths make one whole? **5**

2) Find the perimeter of the rectangle.



3) How many metres are equal to 400 centimetres? **4**

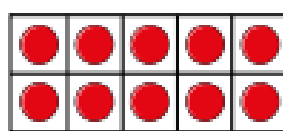
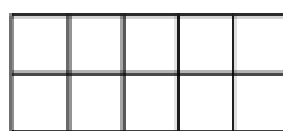
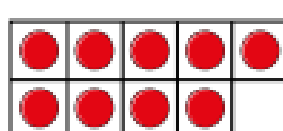
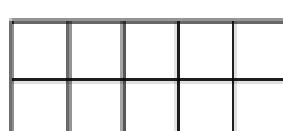


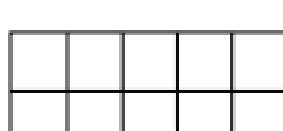
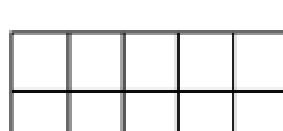
4) How much money is there altogether?



£11 and 52 p







Count in tenths

1 Continue the sequence.

	$\frac{10}{10}$		<input type="text"/>
	$\frac{9}{10}$		<input type="text"/>
	<input type="text"/>		<input type="text"/>
	<input type="text"/>		<input type="text"/>



2 Continue the sequence.

	$\frac{1}{10}$		<input type="text"/>
	$\frac{2}{10}$		<input type="text"/>
	<input type="text"/>		<input type="text"/>



3 Write the missing fractions in each sequence.

a)

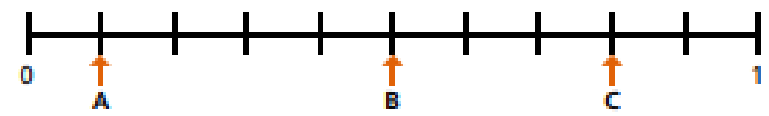
$\frac{1}{10}$	$\frac{2}{10}$	<input type="text"/>	$\frac{4}{10}$	<input type="text"/>
$\frac{6}{10}$	$\frac{7}{10}$	<input type="text"/>	$\frac{9}{10}$	$\frac{10}{10}$

b)

$\frac{10}{10}$	$\frac{9}{10}$	<input type="text"/>	$\frac{7}{10}$	<input type="text"/>
$\frac{5}{10}$	<input type="text"/>	<input type="text"/>	$\frac{2}{10}$	$\frac{1}{10}$

MAIN TASK SHEET

4 What fraction is each arrow pointing to?

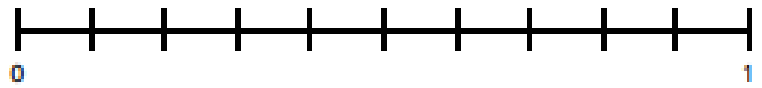


A = B = C =

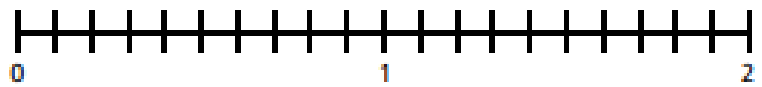
EXTENSION SHEET

5 Write the fractions in the correct places on the number lines.

- a) $\frac{5}{10}$ $\frac{9}{10}$ $\frac{3}{10}$ $\frac{10}{10}$

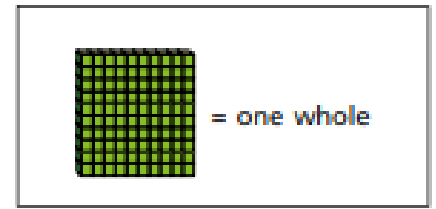


- b) $\frac{6}{10}$ $\frac{14}{10}$ $\frac{18}{10}$

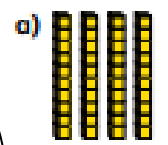


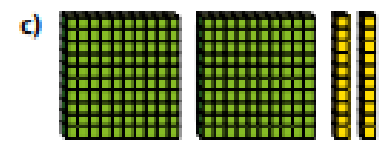
In this case, 1 is equal to $\frac{10}{10}$ as the 1's have been shared into 10 equal parts.

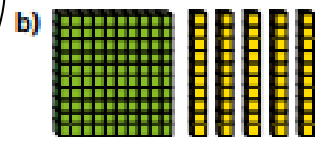
7



What number is represented in each picture?

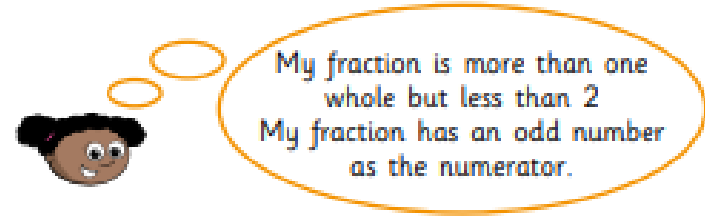






8

Whitney is thinking of a fraction.



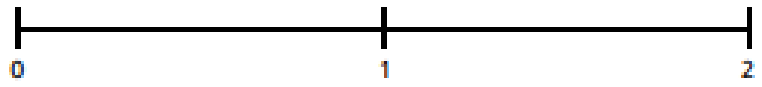
What could Whitney's fraction be?

List all the possible fractions.

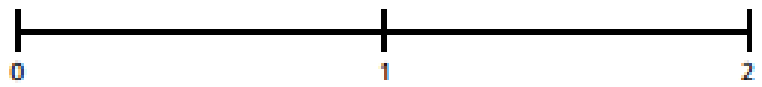
Compare answers with a partner.

6 Draw and label arrows to estimate the position of the fractions on the number lines.

- a) $\frac{5}{10}$ $\frac{15}{10}$ $\frac{20}{10}$



- b) $\frac{3}{10}$ $\frac{11}{10}$ $\frac{19}{10}$



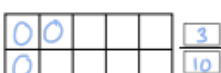
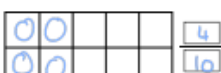
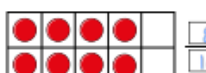
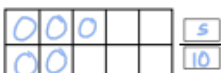
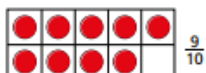
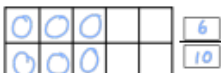
Answers

Count in tenths

White Rose Maths



1 Continue the sequence.



2 Continue the sequence.

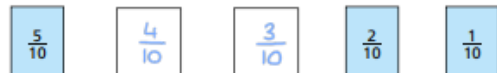


3 Write the missing fractions in each sequence.

a)



b)

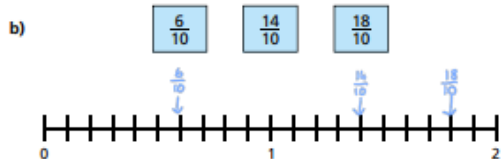
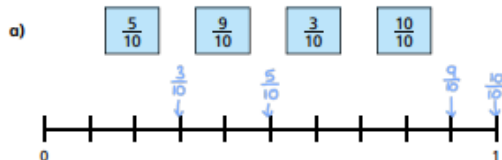


4 What fraction is each arrow pointing to?

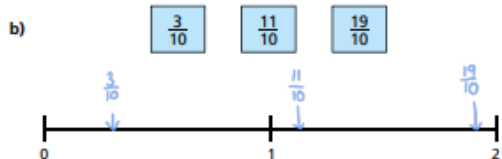
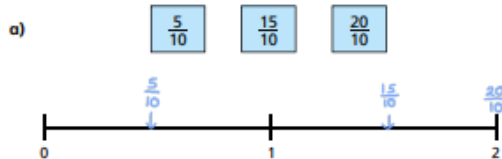


A = $\frac{1}{10}$ B = $\frac{5}{10}$ C = $\frac{8}{10}$

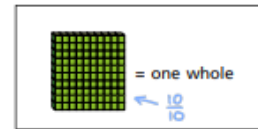
5 Write the fractions in the correct places on the number lines.



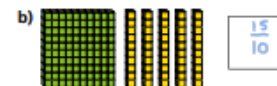
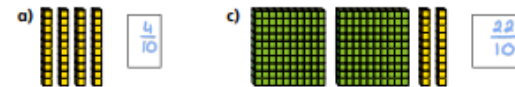
6 Draw and label arrows to estimate the position of the fractions on the number lines.



7



What number is represented in each picture?



8 Whitney is thinking of a fraction.



My fraction is more than one whole but less than 2
My fraction has an odd number as the numerator.

What could Whitney's fraction be?

List all the possible fractions.

$\frac{11}{10}$ $\frac{13}{10}$ $\frac{15}{10}$ $\frac{17}{10}$ $\frac{19}{10}$

Compare answers with a partner.

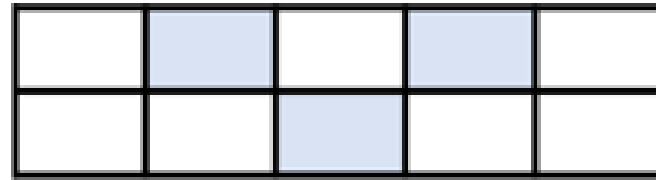
Year 3 Maths

19.06.20

Challenge Day

Day 5 Starter:

- 1) What fraction of the shape is shaded?
Give your answer in words.



- 2) Add 1 m 46 cm to 2 m 56 cm.
- 3) Complete: 60 millimetres = ____ centimetres
- 4) Subtract 347 from 561

Day 5 Starter

Answers:

1) What fraction of the shape is shaded ?

Give your answer in words.



Three tenths

2) Add 1 m 46 cm to 2 m 56 cm.

4 m and 2 cm

3) Complete: 60 millimetres = 6 centimetres

4) Subtract 347 from 561

214

Challenge 1

Jane is standing in a queue.

There are 5 people in front of her.

There are 2 people behind her.

How many people are in the queue?



Challenge 2



I have 80 pence.

Rosie



I have 12 pence.

Mo

Rosie gives Mo 25 pence.

How much more money does Rosie have than Mo now?

Challenge 3

If

$$70 + \text{circle} = 100$$

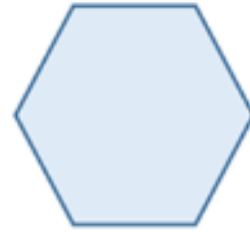
$$50 + \text{triangle} = 100$$

$$\text{circle} + \text{triangle} + \text{square} = 100$$

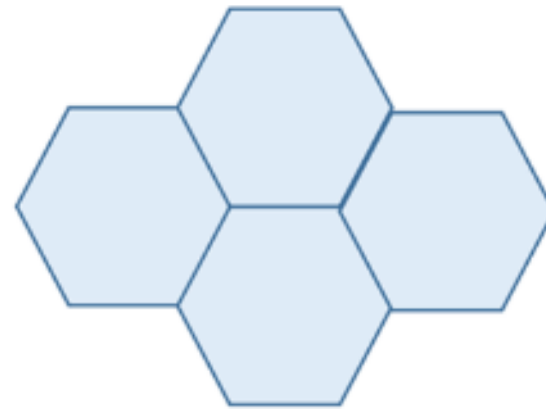
What is the value of the blue square?

Challenge 4

The perimeter of this regular hexagon is 42 cm.



Four of these hexagons are put together to make this shape.



What is the perimeter of the shape?

Answers

Challenge 1 - 8 people

Challenge 2 - 18 pence

Challenge 3 - The blue square is equal to 20

Challenge 4 - 98 cm