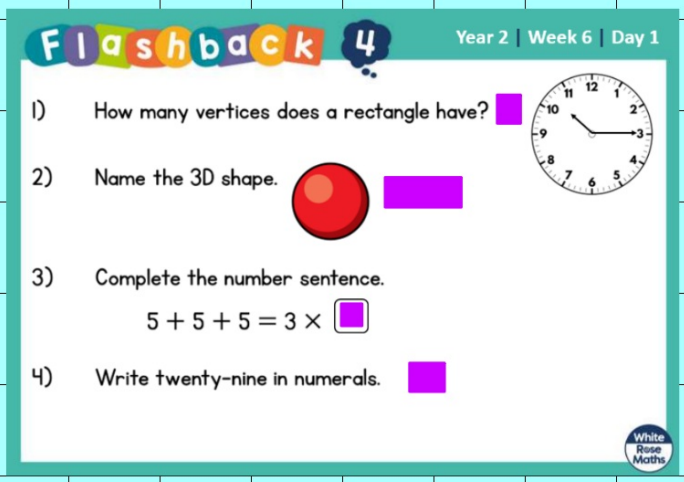
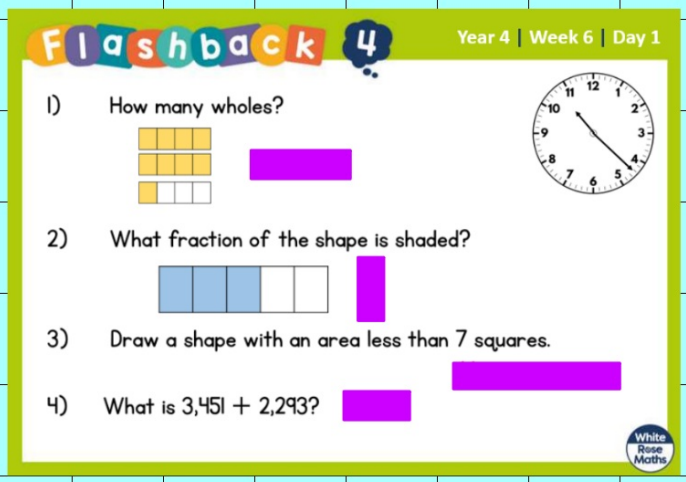
07.02.22

: To find a quarter.
ın find quarters of shapes, objects and quantities.
ıow that quarter means sharing amounts into four equal groups.
ıderstand the relationship between half of an amount and a quarter ın amount.

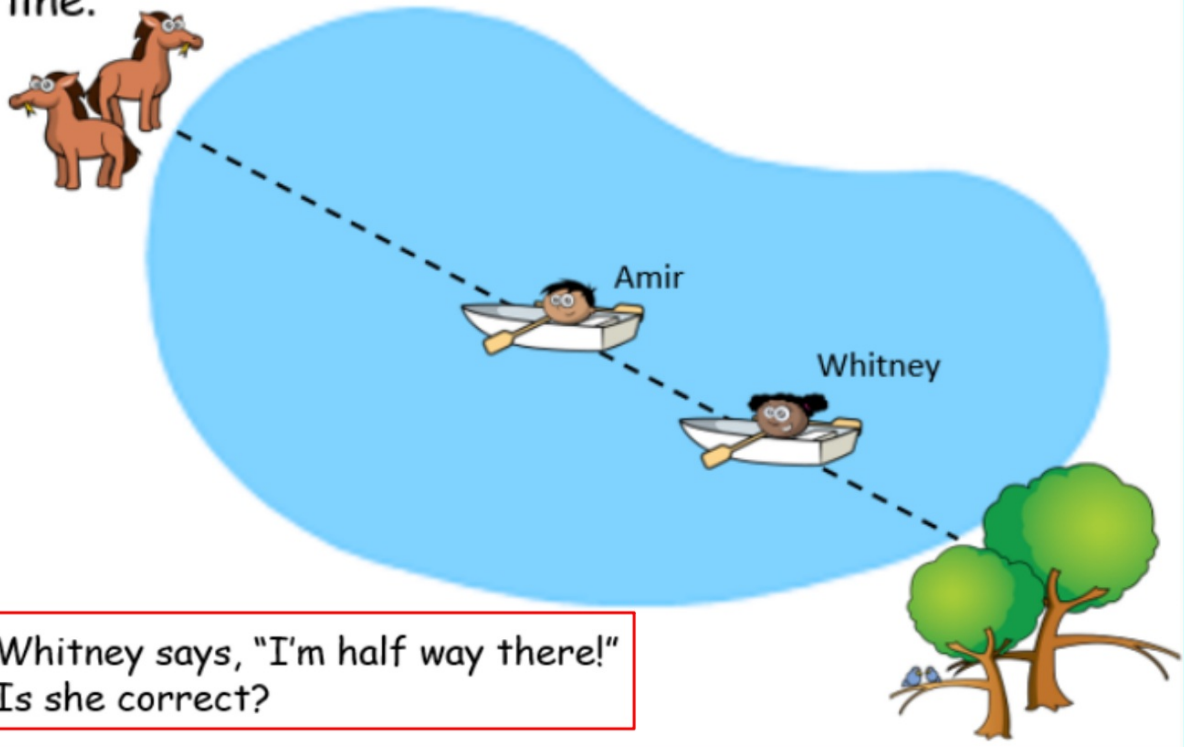
LO: To find equivalent fractions (2)
I can find equivalence through diagrams.
I know that multiplying the numerators and denominators by the same number to ensure that fractions are equivalent.
I understand what equivalent means.



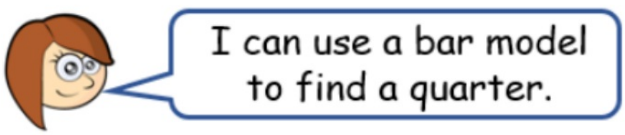


Here are 12 cakes.
They are shared equally between 4 plates.

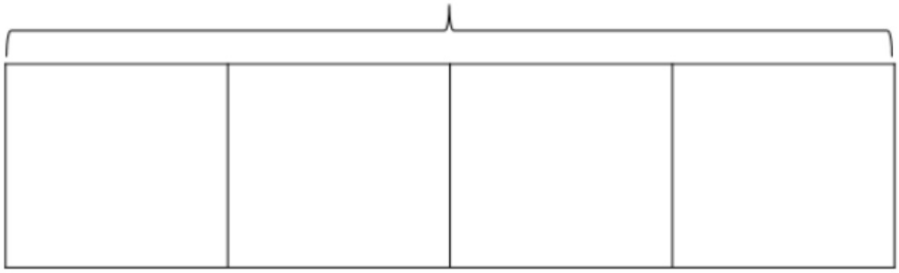
Amir and Whitney are rowing from the trees to the horses. Their route is marked by the dotted line.



Whitney says, "I'm half way there!"
Is she correct?



16



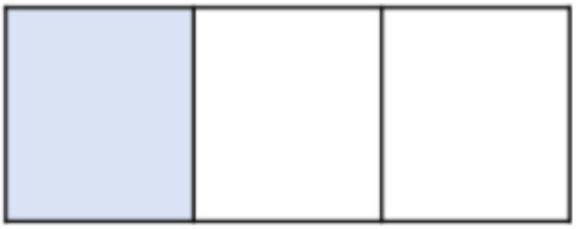
Here is $\frac{1}{4}$ of Ron's marbles.

How many marbles does Ron have altogether?

$\frac{1}{4}$ of $\square = 2$

Group A start

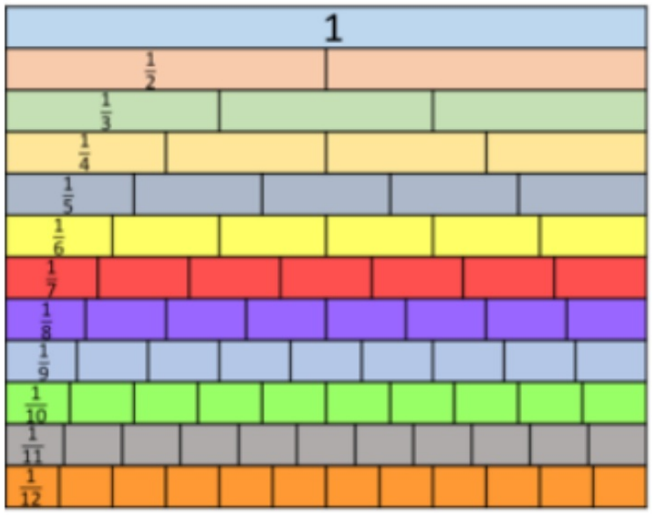
$$\frac{1}{3} = \frac{\square}{6}$$



$$\frac{2}{3} = \frac{\square}{9}$$

Use the different representations to find the equivalent fraction.

$$\frac{4}{5} = \frac{\square}{10}$$



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

What do you notice?

$$\frac{1}{3} = \frac{\boxed{2}}{6}$$

$$\frac{2}{3} = \frac{\boxed{6}}{9}$$

$$\frac{3}{4} \overset{+4}{=} \frac{7}{8} \overset{+4}{}$$

Do you agree with Tiny?

$\frac{3}{4} = \frac{\square}{16}$

$\frac{2}{9} = \frac{6}{\square}$

$\frac{7}{\square} = \frac{14}{20}$

$\frac{3}{7} = \frac{\square}{\square}$

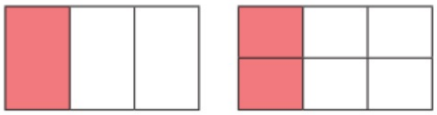
How can we find the missing numerators and denominators?

$$\frac{3}{\square} = \frac{\square}{20} = \frac{9}{\square} = \frac{6}{8}$$

Shade the diagrams to help you complete the equivalent fractions.

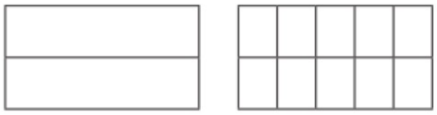
The first one has been done for you.

a)



$\frac{1}{3} = \frac{2}{6}$

b)



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

c)

$\frac{1}{4} = \frac{\square}{\square}$

Draw a diagram to show that $\frac{3}{4} = \frac{6}{8}$

Match the equivalent fractions.

$\frac{1}{4}$	$\frac{4}{10}$	$\frac{10}{15}$	$\frac{1}{7}$
$\frac{3}{21}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{3}{12}$

4 Complete the equivalent fractions.

a) $\frac{1}{5} = \frac{\square}{10}$

b) $\frac{4}{5} = \frac{\square}{10}$

c) $\frac{3}{10} = \frac{6}{\square}$

d) $\frac{3}{10} = \frac{9}{\square}$

e) $\frac{6}{8} = \frac{3}{\square}$

f) $\frac{8}{12} = \frac{\square}{3}$

g) $\frac{8}{12} = \frac{2}{\square}$

h) $\frac{2}{\square} = \frac{10}{25}$

i) $\frac{1}{\square} = \frac{4}{28}$

5 a) Write the fractions in the correct place on the sorting diagram.

$\frac{8}{24}$	$\frac{3}{12}$	$\frac{5}{15}$	$\frac{6}{24}$	$\frac{4}{12}$	$\frac{9}{36}$	$\frac{3}{9}$	$\frac{4}{1}$

	equivalent to $\frac{1}{3}$	equivalent to $\frac{1}{4}$
odd denominator		
even denominator		

b) Are any of the boxes empty?

Why do you think this is?

Talk about your answer with a partner.

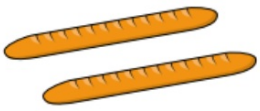
6 Find three ways to make the fractions equivalent.

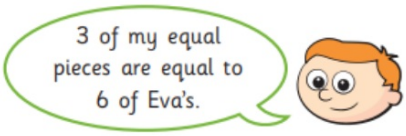
a) $\frac{2}{\square} = \frac{4}{\square}$ **b)** $\frac{1}{\square} = \frac{4}{\square}$ **c)** $\frac{\square}{3} = \frac{\square}{9}$

7 Eva and Ron have a baguette each.

The baguettes are the same size.

Eva cuts her baguette into 8 equal pieces.

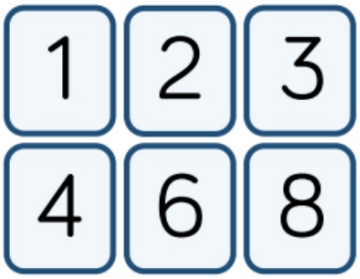




How many equal pieces has Ron cut his baguette into?

Extension

Use the digit cards to complete the equivalent fractions.



$$\frac{\square}{\square} = \frac{\square}{\square}$$

How many different ways can you find?

True or False?

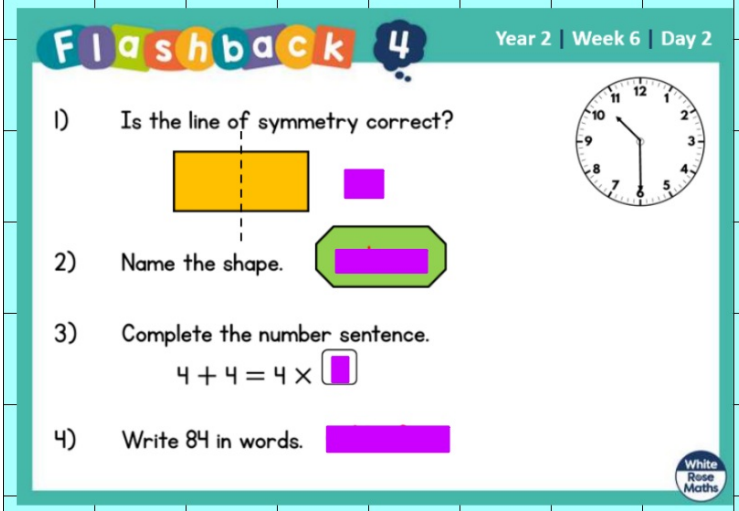
$$\frac{6}{27} = \frac{16}{72}$$

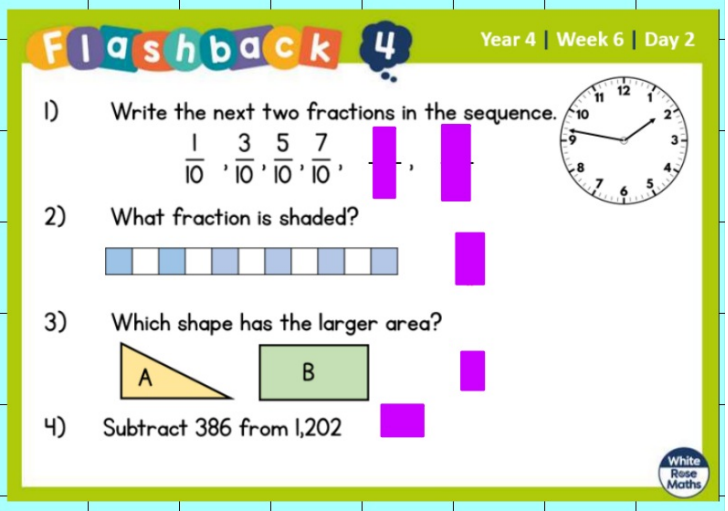
White Rose Maths

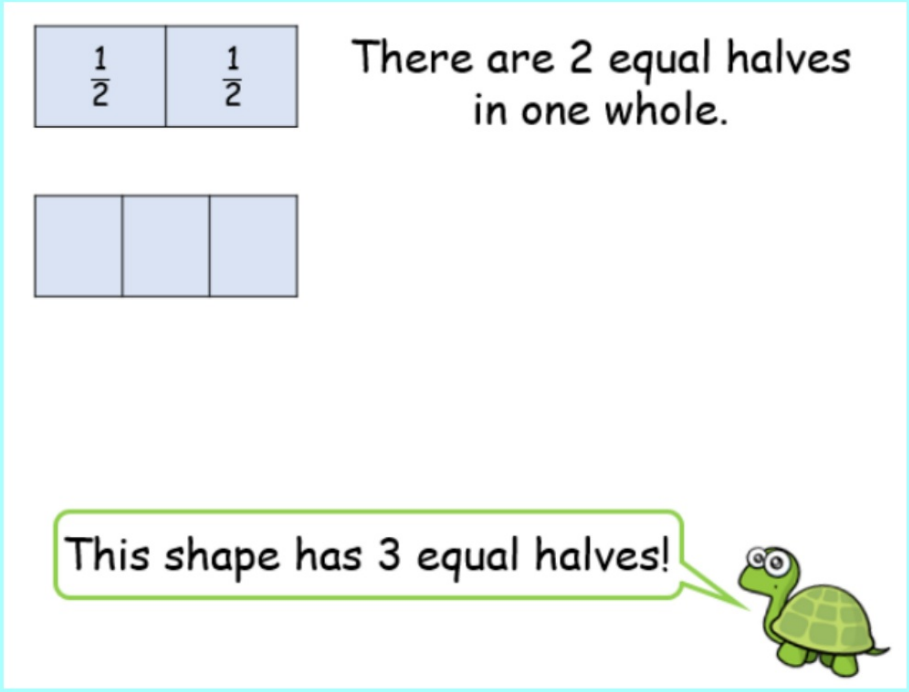
08.02.22

LO: To recognise a third.
I can apply my understanding of other fractions to finding thirds.
I know how to write one third as a fraction and explain what each of the digits represent in the fractional notation.
I understand that one third is equal to one part out of three equal parts.

LO: To find fractions greater than 1.
I can use manipulatives and diagrams to show that a fraction can be split into wholes and parts.
I know that if the numerator is bigger than the denominator, the fraction is greater than 1.
I understand how many parts equal a whole.







Is Tiny's wording correct?

There are 2 equal halves in one whole.

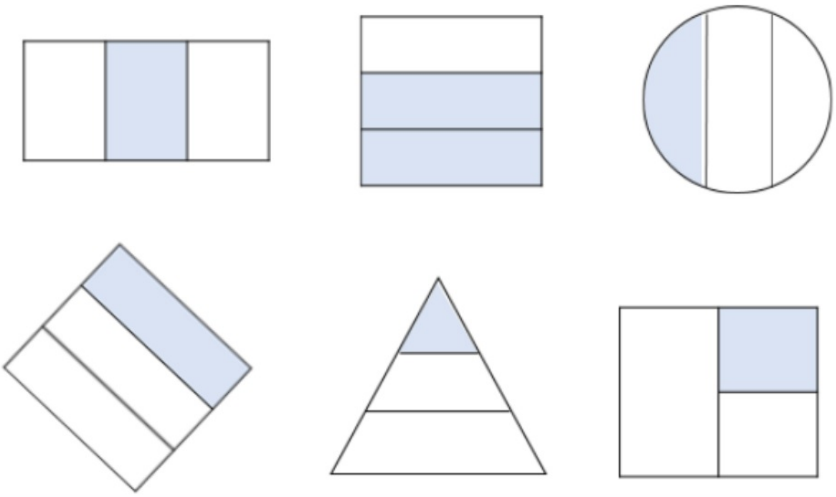
There are 3 equal thirds in one whole.

There are 4 equal quarters in one whole.

What does the bottom number tell us?

What are the top and bottom numbers called in a fraction?

Which of these shapes have one third shaded?

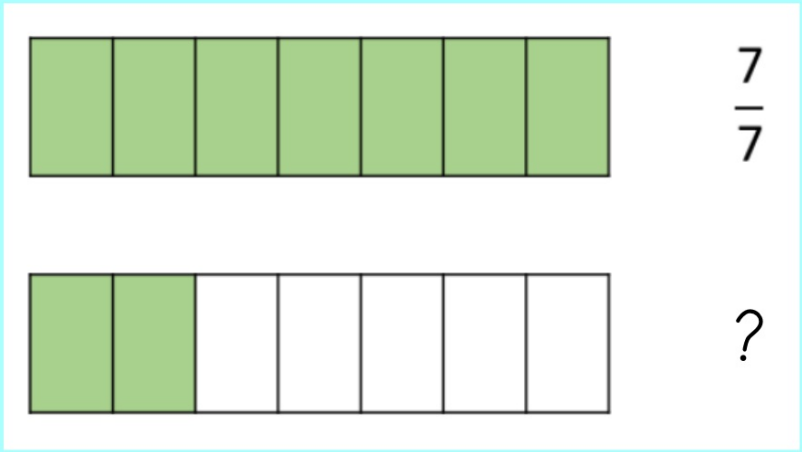


$\frac{1}{3}$ is smaller than $\frac{1}{4}$

I think $\frac{1}{3}$ is greater than $\frac{1}{4}$

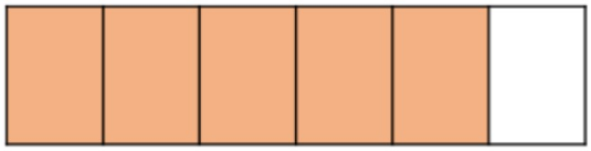
Who is correct?

Group A start



How many sevenths are there altogether?

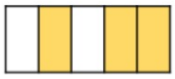
$\frac{2}{6}$



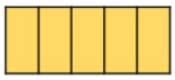
$\frac{5}{6}$

How many sixths altogether?

1)

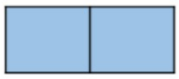


There are ____ fifths altogether.



____ fifths = ____ wholes + ____ fifth.

2)

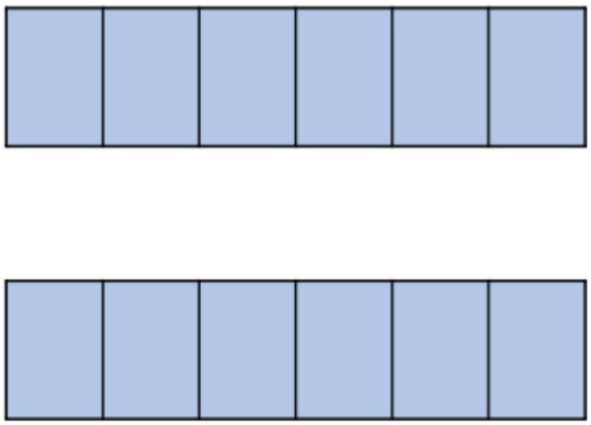


There are ____ halves altogether.

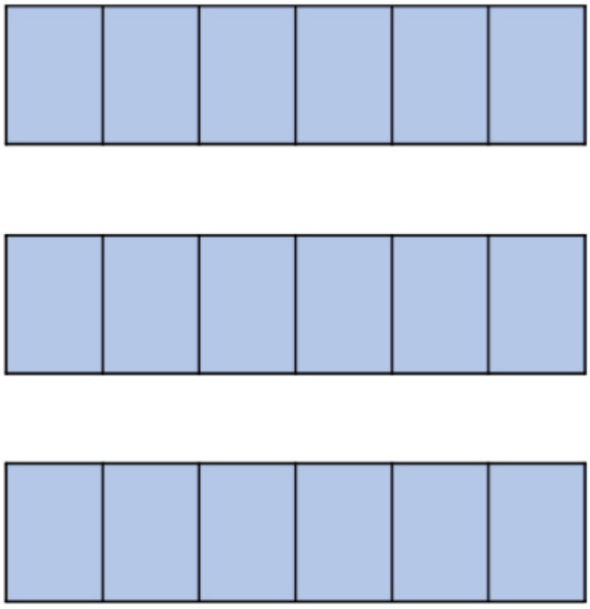
____ halves = ____ whole + ____ half.

$\frac{12}{6}$ Improper fraction

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



$\frac{18}{6}$



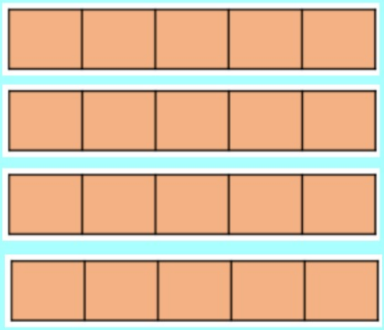
$\frac{6}{6}$

$\frac{6}{6}$

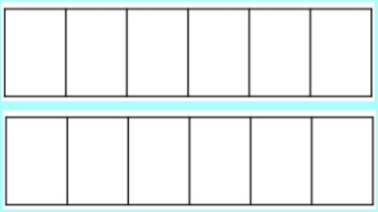
$\frac{6}{6}$

$\frac{18}{6} =$

$\frac{20}{5}$



$\frac{10}{6}$

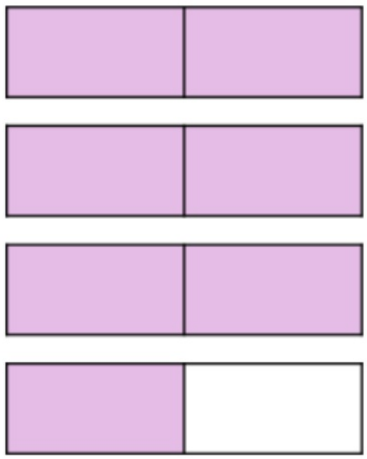


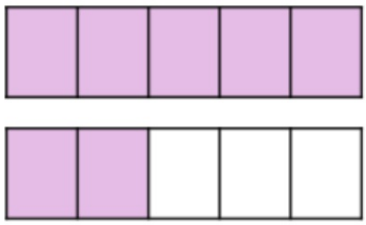
1) $\frac{11}{3}$ = ____ wholes + ____ thirds

2) $\frac{9}{2}$ = ____ wholes + ____ half

3) $\frac{20}{7}$ = ____ wholes + ____ sevenths

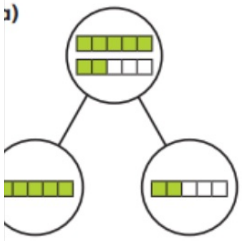
$\frac{7}{2}$ ◯ $\frac{7}{5}$





Complete the sentences.

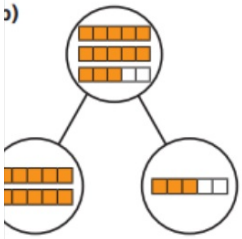
a)



There are 7 fifths altogether.

7 fifths = ☐ whole + ☐ fifths

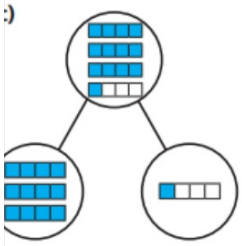
b)



There are ☐ fifths altogether.

☐ fifths = ☐ wholes + ☐ fifths

c)



There are ☐ quarters altogether.

☐ quarters = ☐ wholes + ☐ quarter

2 Shade bar models to represent the fractions.

Complete the number sentences.

a) $\frac{5}{3}$ $\frac{5}{3}$ = ☐ whole + ☐ thirds = ☐

b) $\frac{8}{3}$ $\frac{8}{3}$ = ☐ wholes + ☐ thirds = ☐

c) $\frac{8}{5}$ $\frac{8}{5}$ = ☐ whole + ☐ fifths = ☐

3 Complete the statements.

a) $\frac{12}{2}$ = ☐ wholes

b) $\frac{12}{4}$ = ☐ wholes

c) $\frac{12}{6}$ = ☐ wholes

d) $\frac{12}{3}$ = ☐ wholes

e) $\frac{15}{3}$ = ☐ wholes

f) $\frac{15}{5}$ = ☐ wholes

g) $\frac{15}{4}$ = ☐ wholes + ☐ quarte

h) $\frac{15}{2}$ = ☐ wholes + ☐ half

4 Whitney bakes 26 muffins.

Muffins are packed in boxes of 4

a) How many boxes can Whitney fill?

b) How many more muffins does Whitney need to fill anoth

Explain how you know.

How does writing $\frac{26}{4}$ help you to answer this?

5 Write <, > or = to complete the statements.

a) 2 wholes and 3 quarters ◯ 5 quarters

b) 2 wholes and 3 quarters ◯ 15 quarters

c) 2 wholes and 3 sixths ◯ 15 sixths

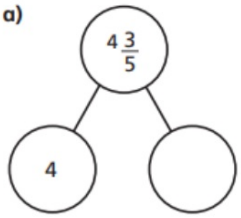
d) 2 wholes and 3 eighths ◯ 15 eighths

e) $\frac{15}{3}$ ◯ $\frac{15}{5}$

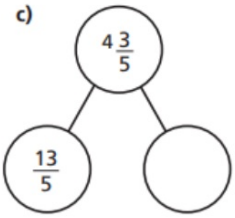
f) $\frac{15}{3}$ ◯ $\frac{20}{4}$

6 Complete the part-whole models.

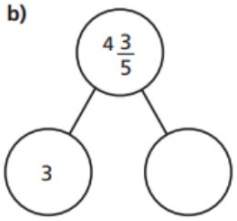
a)



c)

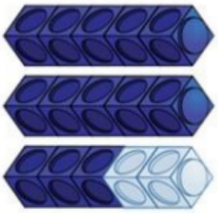


b)



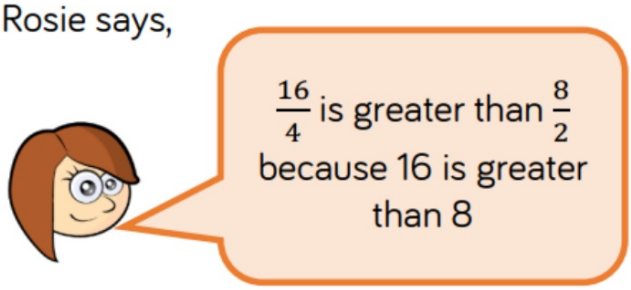
Extension

Spot the mistake.



$\frac{13}{5}$ = 10 wholes and 3 fifths

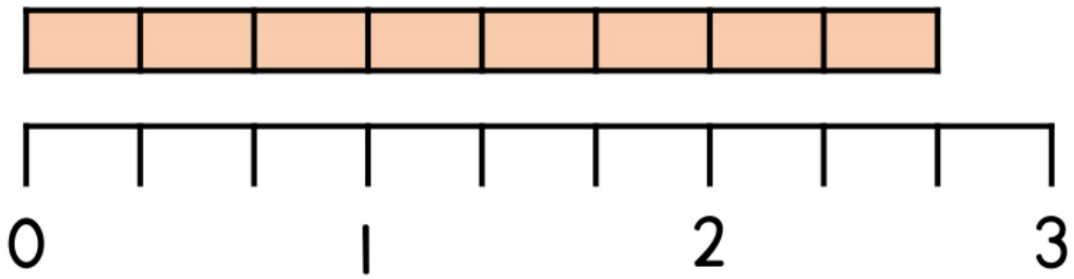
Rosie says,



Do you agree?
Explain why.

True or False?

The diagram shows $3\frac{2}{3}$

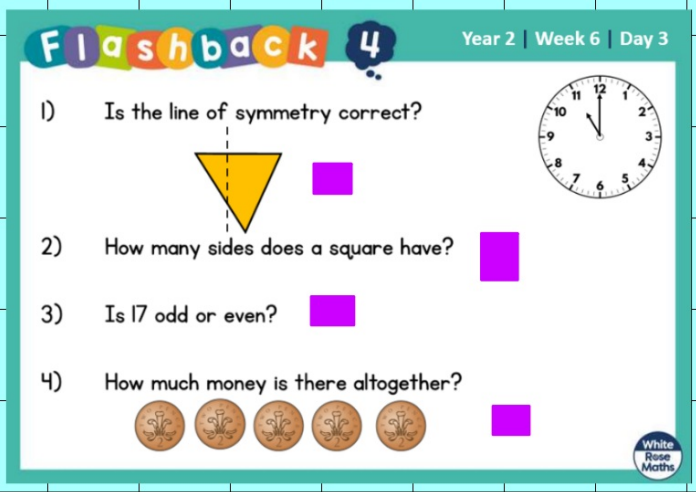


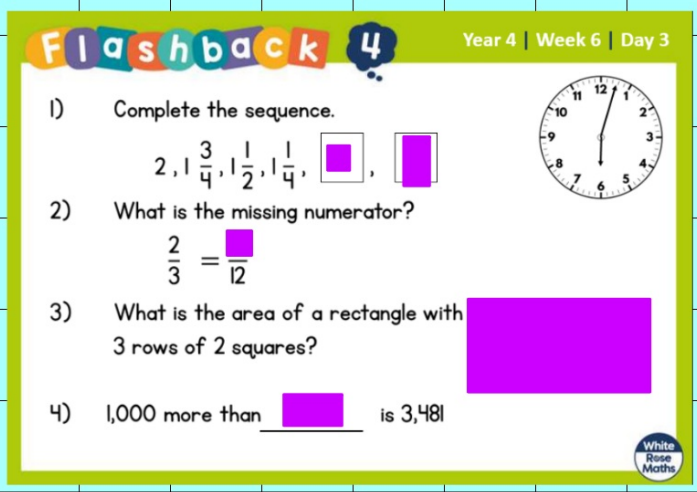
White Rose Maths

09.02.22

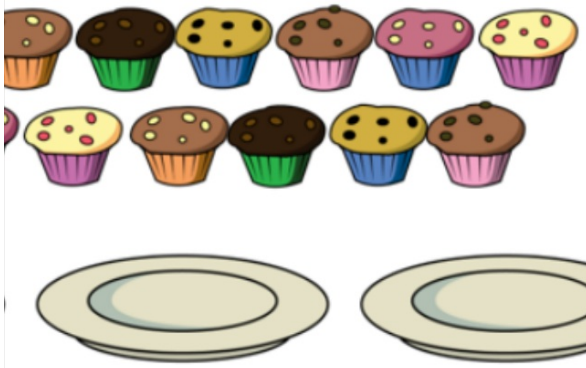
LO: To find a third.
I can use my knowledge of division and sharing to find a third.
I know how to count in 3s.
I understand that a third means that the fraction is split into 3 equal parts.

LO: To count in fractions.
I can count in fractions greater than 1 on a number line.
I know how to make connections between improper and mixed number fractions.
I understand that fractions can be written in more than one way.





kes.
d equally onto 3 plates.
s will be on each plate?



Ron and Amir use an array to find
of 18

Annie uses a bar model to find $\frac{1}{3}$ of 21

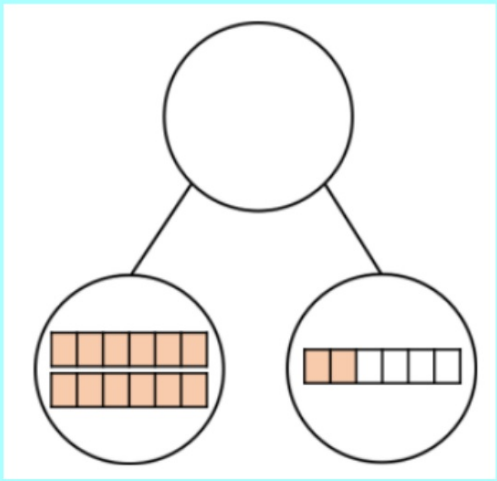
$\frac{1}{3}$ of $\square$ $= 15$

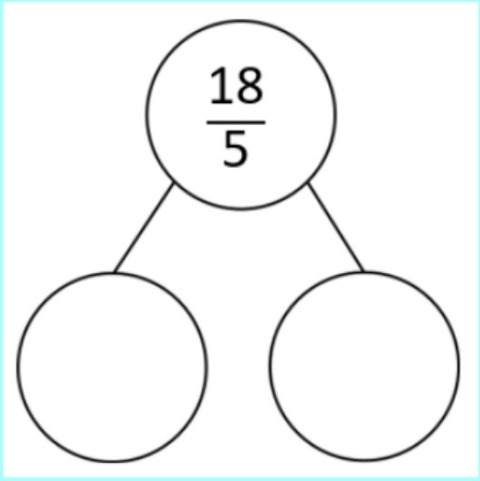
Jack has one third of his birthday money left.
Dora has half of her birthday money left.
They both have £10 left.

What do you know?

What can you find out?

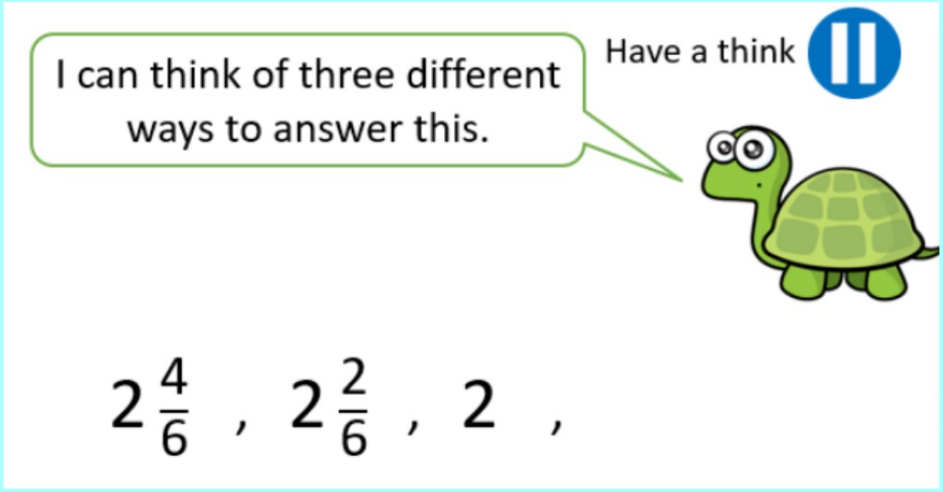
Group A start

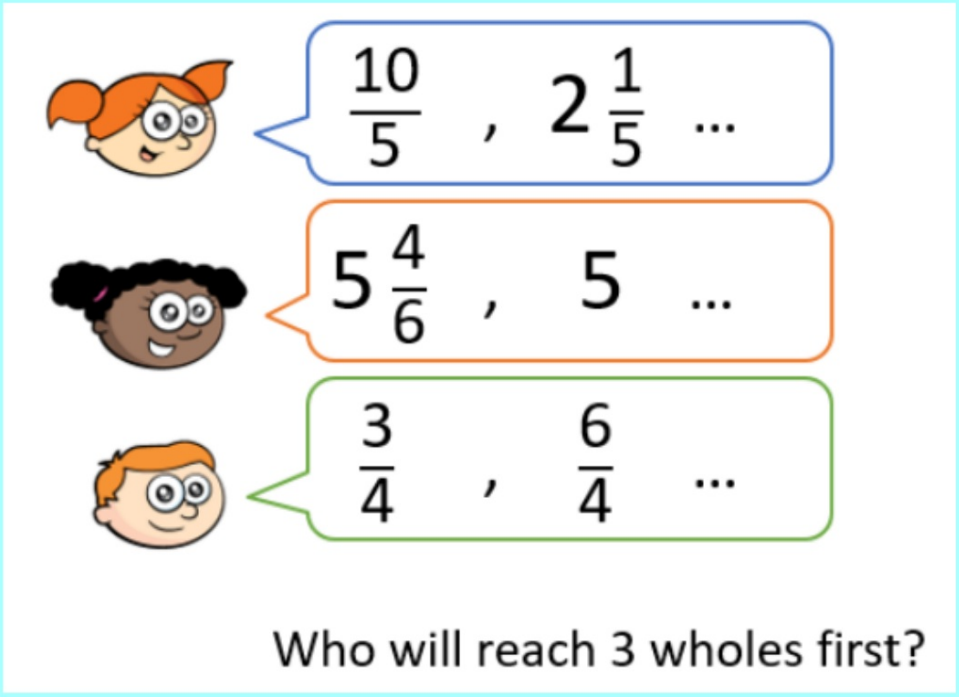



18
5

+ 1/6
4/6
5/6
6/6

+ 3/8
1/8
4/8

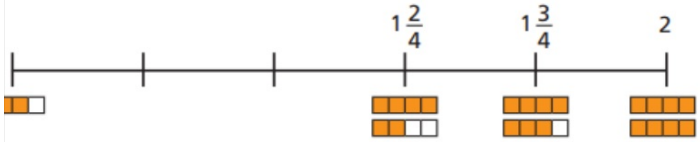

I can think of three different ways to answer this.
Have a think
$2\frac{4}{6}$, $2\frac{2}{6}$, 2 ,


$\frac{10}{5}$, $2\frac{1}{5}$ ...
$5\frac{4}{6}$, 5 ...
$\frac{3}{4}$, $\frac{6}{4}$ ...
Who will reach 3 wholes first?

omplete the number lines.

)

)



omplete the number lines.

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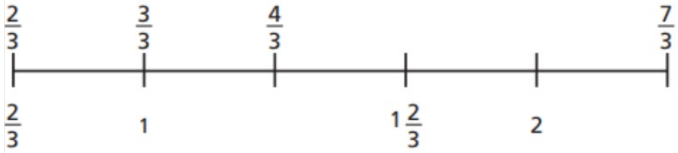

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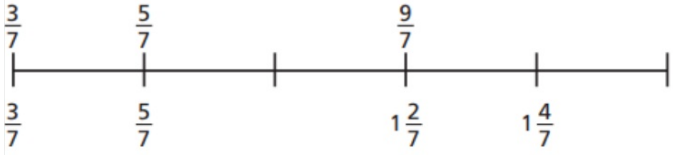
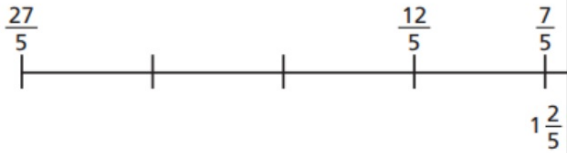


c)



3 Write the next three fractions in each sequence.

a) $\frac{1}{8}, \frac{2}{8}, \frac{3}{8} \ldots$

b) $\frac{1}{4}, \frac{2}{4}, \frac{3}{4} \ldots$

c) $\frac{1}{4}, \frac{3}{4}, 1\frac{1}{4} \ldots$

d) $4, 3\frac{1}{3}, 2\frac{2}{3} \ldots$

4 What is the missing fraction?

Give two possible answers.

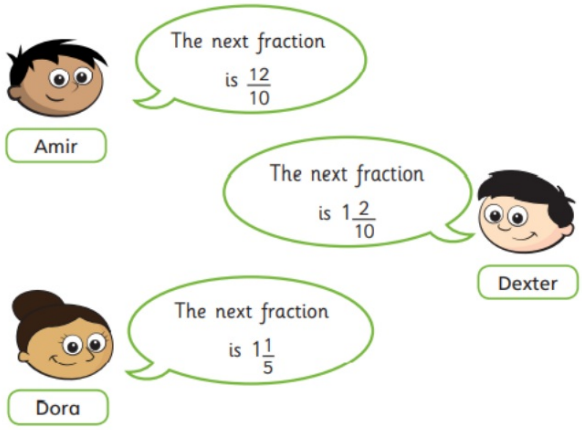
a) $\frac{8}{3}, \frac{12}{3}, \frac{16}{3}, \frac{20}{3}, \square, \frac{28}{3}, \frac{32}{3}$

b) $\frac{8}{5}, \frac{12}{5}, \frac{16}{5}, \frac{20}{5}, \square, \frac{28}{5}, \frac{32}{5}$

c) $\frac{8}{7}, \frac{12}{7}, \frac{16}{7}, \frac{20}{7}, \square, \frac{28}{7}, \frac{32}{7}$

5 Amir, Dexter and Dora are counting in fractions.

$\frac{8}{10}, \frac{9}{10}, \frac{10}{10}, \frac{11}{10}$



a) Who is correct?

Explain your answer.

b) Compare answers with a partner.

Extension

Here is a number sequence.

$\frac{5}{12}, \frac{7}{12}, \frac{10}{12}, \frac{14}{12}, \frac{19}{12}, \text{———}$

Which fraction would come next?
Can you write the fraction in more than one way?

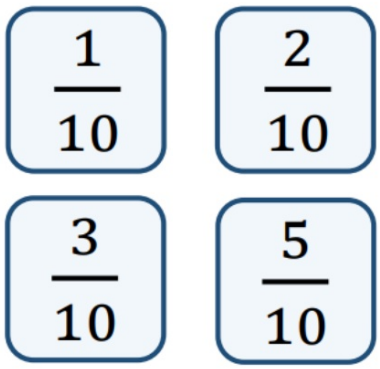
Circle and correct the mistakes in the sequences.

$\frac{5}{12}, \frac{8}{12}, \frac{11}{12}, \frac{15}{12}, \frac{17}{12}$

$\frac{9}{10}, \frac{7}{10}, \frac{6}{10}, \frac{3}{10}, \frac{1}{10}$

Extension

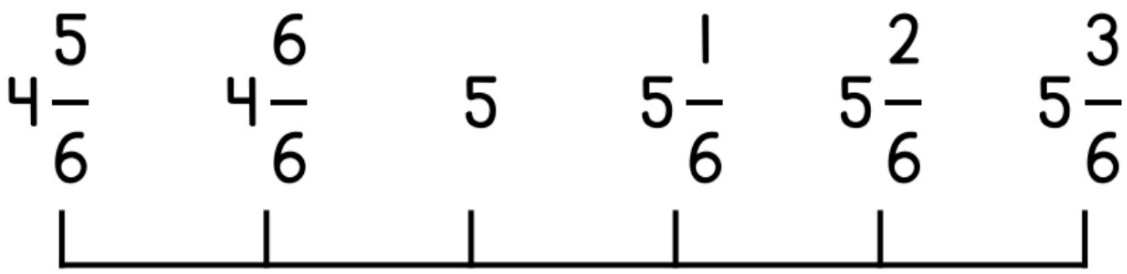
Play the fraction game for four players.
Place the four fraction cards on the floor.
Each player stands in front of a fraction.
We are going to count up in tenths starting at 0
When you say a fraction, place your foot on your fraction.



How can we make 4 tenths?
What is the highest fraction we can count to?
How about if we used two feet?

True or False?

Rosie has counted correctly in sixths along a number line.

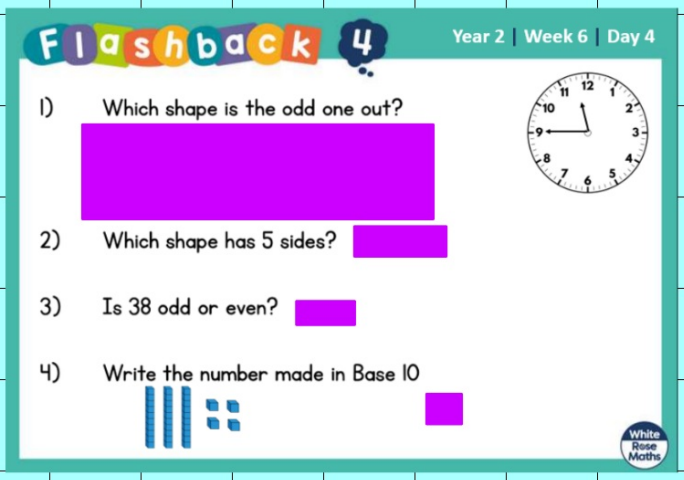


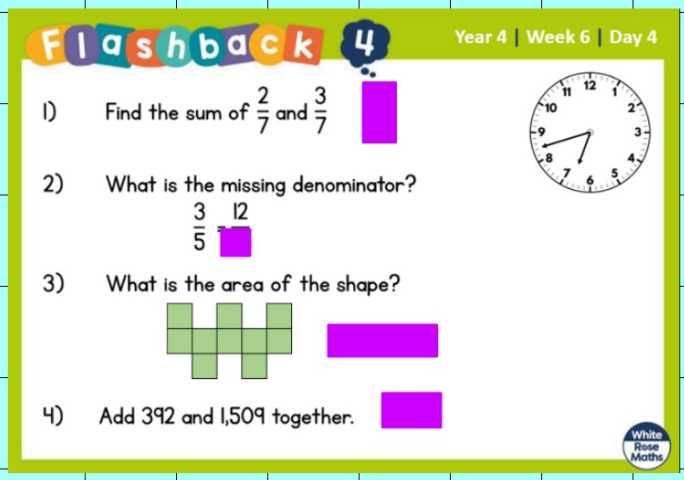
White Rose Maths

10.02.22

LO: To understand what a unit fraction is.
I can link this to my knowledge of halves, quarters and thirds.
I know that the denominator represents the number of parts that a shape or quantity is split into.
I understand the concept of a unit fraction by recognising it as one equal part of a whole.

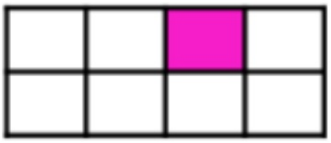
LO: To add fractions.
I can add two or more fractions with the same denominator
I know how to use a bar model.
I understand that we only add the numerators and the denom stay the same.





What fraction of these squares has been shaded?

What fraction of each shape is shaded?



What is the fraction called when there is a 1 in the numerator?

A unit fraction is a fraction where the numerator is 1

$\frac{1}{?}$ Have a think

Does this represent a unit fraction?

$\frac{1}{73}$

A unit fraction is a fraction where the numerator is 1

$\frac{1}{?}$ Have a think

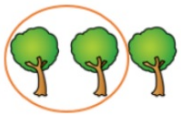
Does this represent a unit fraction?

$\frac{2}{73}$

A unit fraction is a fraction where the numerator is 1

$\frac{1}{?}$ Have a think

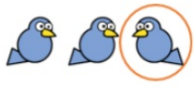
Does this represent a unit fraction?



A unit fraction is a fraction where the numerator is 1

$\frac{1}{?}$ Have a think

Does this represent a unit fraction?

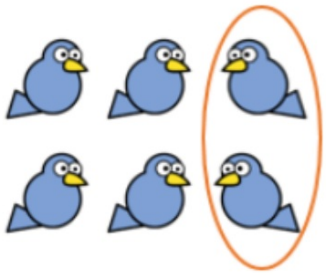


A unit fraction is a fraction where the numerator is 1

$$\frac{1}{?}$$

Have a think

Does this represent a unit fraction?



Group A start

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

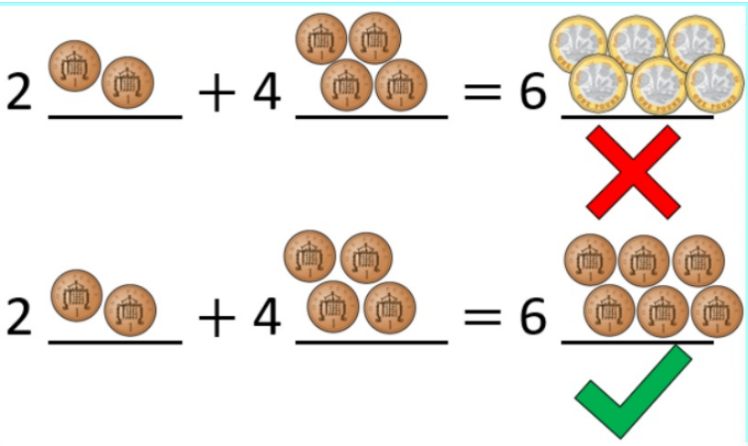
$\frac{2}{7} + \frac{4}{7} =$

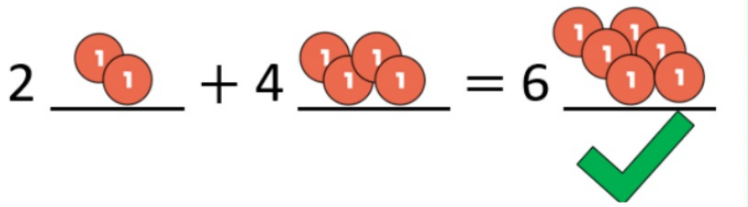
$2 + 4 = 6$

$7 + 7 = 14$

So the answer is $\frac{6}{14}$

Do you think that Tiny is right?

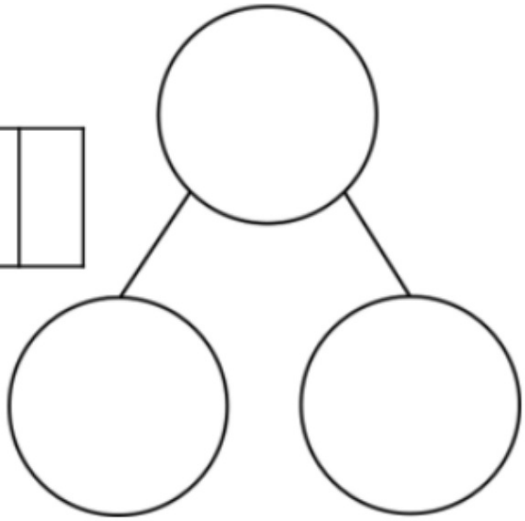




2 hundreds + 4 hundreds = 6 hundreds

2 sevenths + 4 sevenths = 6 sevenths

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

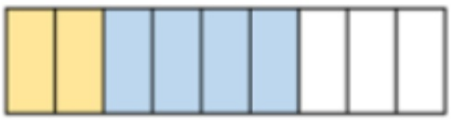


$\frac{1}{7} + \frac{2}{7} = \frac{3}{7}$

What do you notice?

$\frac{2}{7} + \frac{4}{7} = \frac{6}{7}$

$\frac{2}{9} + \frac{4}{9} = \frac{6}{9}$



1 2 3 4 5 6

$$\frac{\square}{9} + \frac{\square}{9} = \frac{\square}{9}$$

You can use each digit card once per solution.

How many solutions can you find?

Complete the additions.

Use the bar models to help you.

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

b) $\frac{1}{5} + \frac{1}{5} = \square$

c) $\frac{1}{5} + \frac{2}{5} = \square$

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

Shade circles like this one to help you complete the additions.

a) $\frac{1}{8} + \frac{3}{8} = \square$

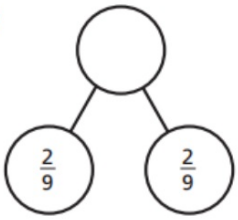
b) $\frac{5}{8} + \frac{1}{8} = \square$

c) $\frac{3}{8} + \frac{3}{8} = \square$

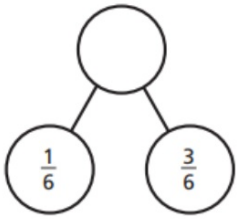
d) $\frac{5}{8} + \frac{3}{8} = \square$

Complete the part-whole models.

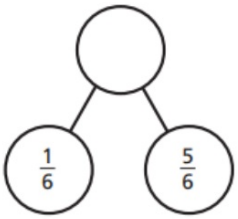
a)



b)



c)



Which part-whole model is the odd one out?

Talk about your choice with a partner. Did they choose th odd one out?

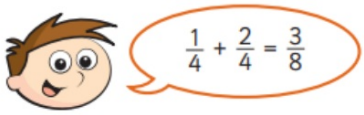
4 Alex and Huan are eating a cake.

Alex eats $\frac{4}{7}$ of the cake.

Huan eats $\frac{2}{7}$ of the cake.

What fraction of the cake have they eaten altogether?

5 Teddy is adding fractions.



a) Draw a bar model to show that Teddy is wrong.

b) Complete the addition $\frac{1}{4} + \frac{2}{4} = \square$

6 Annie has baked 12 muffins.

She puts them into 2 boxes.

What fraction of the muffins could she put in each box?

Complete the table to show different possibilities.

One has been done for you.

Box 1	Box 2
$\frac{1}{12}$	$\frac{11}{12}$

Are there any other possibilities? Talk about it with a partner.

7 Complete the additions.

a) $\frac{3}{8} + \frac{4}{8}$

b) $\frac{3}{9} + \frac{4}{9}$

c) $\frac{3}{29} + \frac{4}{29}$

d) $\frac{3}{103} + \frac{4}{103}$

e) $\frac{5}{31} + \frac{9}{31}$

f) $\frac{17}{111} + \frac{33}{111}$

Extension

Rosie and Whitney are solving:

$$\frac{4}{7}+\frac{2}{7}$$

Rosie says,

The answer is $\frac{6}{7}$

Whitney says,

The answer is $\frac{6}{14}$

Who do you agree with?
Explain why.

Mo and Teddy share these chocolates.

They both eat an odd number of chocolates.
Complete this number sentence to show what fraction of the chocolates they each could have eaten.

$$\frac{\square}{\square}+\frac{\square}{\square}=\frac{12}{12}$$

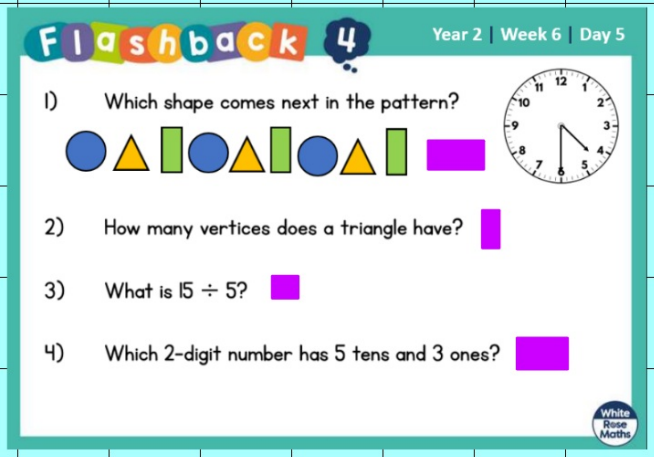
True or False?

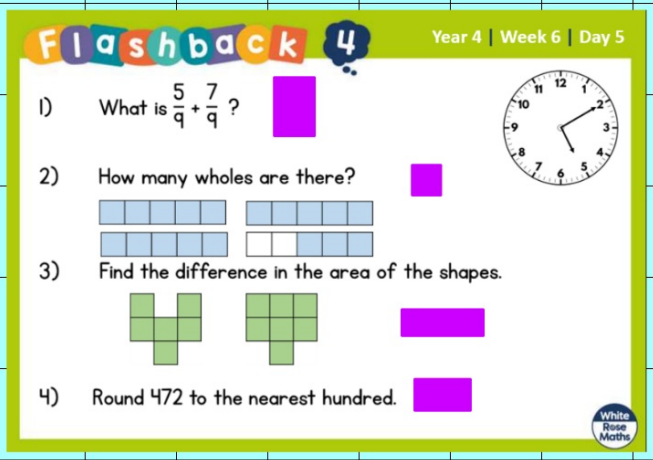
When you add fractions you add the numerators and the denominators.

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

White Rose Maths

11.02.22


Flashback 4
Year 2 | Week 6 | Day 5
1) Which shape comes next in the pattern?
2) How many vertices does a triangle have?
3) What is 15 ÷ 5?
4) Which 2-digit number has 5 tens and 3 ones?
White Rose Maths


Flashback 4
Year 4 | Week 6 | Day 5
1) What is $\frac{5}{9} + \frac{7}{9}$?
2) How many wholes are there?
3) Find the difference in the area of the shapes.
4) Round 472 to the nearest hundred.
White Rose Maths

Group A start

Extension

True of false?