These sessions are based on what the children would have been learning in school over the next couple of weeks, most of the topics have been covered in fluency or in main lesson, so children should have some understanding already. Look out for Miss Evans' Maths videos as she will be covering some parts of fractions we have already done, just incase you have forgotten any skills!

I have created standalone sessions so you can access each one when it is most suitable for your home learning.
Remember *practise makes progress* - have a go, don't worry and keep smiling - you are all fantastic learners!

Fraction Cover Page

Our top tips when working with fractions.

The top number is the **NUMERATOR**.

This tells us how many parts of the whole are need.

The bottom number is the **DENOMINATOR**. This tells us how many equal parts make up the whole.

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

What we already know about this fraction.

- It is a unit fraction beccause the nunmerator is one (if the numerator is more than 1 it is a non unit fraction).
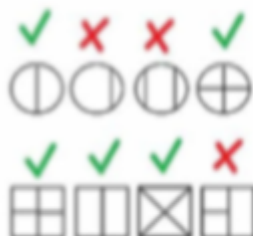
- You need 4 more fifths to make a whole.

Fractions can be represented in different ways:

word	fraction	shape	objects	numberline
One tenth	$\frac{1}{10}$			$\frac{1}{2}$

Don't forget:
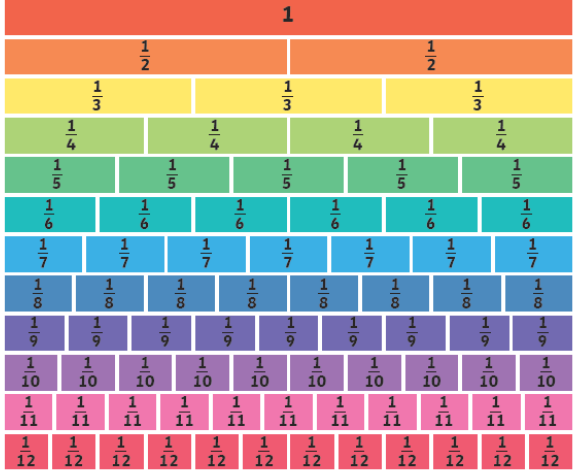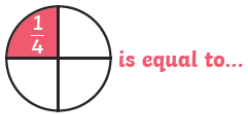
Remember fractions are
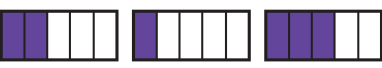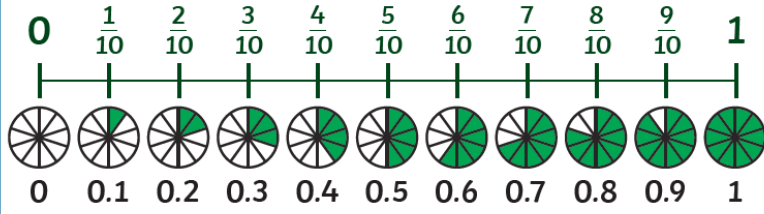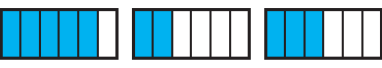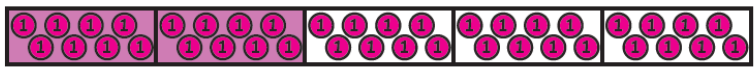
ALWAYS spilt into equal parts.

✓ ✗ ✗ ✓

✓ ✓ ✓ ✗

To improve accuracy - label each shape/object/number line

shape   objects   numberline

$\frac{1}{2}$ $\frac{4}{12}$ $\frac{1}{2}$

Fraction Learning Resource

Fractions — Knowledge Organiser

Key Vocabulary

- numerator
- denominator
- unit fraction
- non-unit fraction
- equivalent
- halves
- thirds
- quarters
- fifths
- sixths
- eighths
- tenths
- decimal tenths

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Recognising Fractions

$\dfrac{3}{8}$

Numerator How many equal parts of the whole are needed?

Denominator How many equal parts are in the whole?

Comparing Fractions

$\dfrac{1}{3}$ Less than $\dfrac{2}{3}$

$\dfrac{4}{5}$ Greater than $\dfrac{3}{5}$

Equivalent Fractions

$\dfrac{1}{2}$ is equal to…

$\dfrac{1}{2} = \dfrac{2}{4} = \dfrac{3}{6} = \dfrac{4}{8} = \dfrac{5}{10} = \dfrac{6}{12}$

$\dfrac{1}{4}$ is equal to…

$\dfrac{1}{4} = \dfrac{2}{8} = \dfrac{3}{12} = \dfrac{4}{16} = \dfrac{5}{20}$

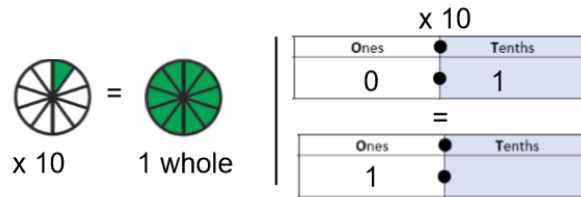| 1											
$\frac{1}{2}$						$\frac{1}{2}$					
$\frac{1}{3}$				$\frac{1}{3}$				$\frac{1}{3}$			
$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$			
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$			
$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$	$\frac{1}{7}$					
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$				
$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$			
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$		
$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	$\frac{1}{11}$	
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$

Fractions — Knowledge Organiser

Add and Subtract Fractions

$\dfrac{2}{5} + \dfrac{1}{5} = \dfrac{3}{5}$

$\dfrac{3}{7} + \dfrac{2}{7} = \dfrac{5}{7}$

$\dfrac{5}{6} - \dfrac{2}{6} = \dfrac{3}{6}$

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Tenths

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

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1

Fractions of Amounts

$\dfrac{1}{4}$ of 24 = 6

$\dfrac{1}{3}$ of 72 = 24

$\dfrac{2}{5}$ of 40 = 16

Quick Guide

A tenth can be represented in different ways:

word	fraction	shape	decimal
One tenth	$\frac{1}{10}$		0.1

A tenth is when a whole is split equally into ten parts (ten, tenths make a whole).

x 10

Ones		Tenths
0		1

=

Ones		Tenths
1		

x 10 = 1 whole

Counting in tenths:

	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	$\frac{9}{10}$	
0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0

twinkl.co.uk
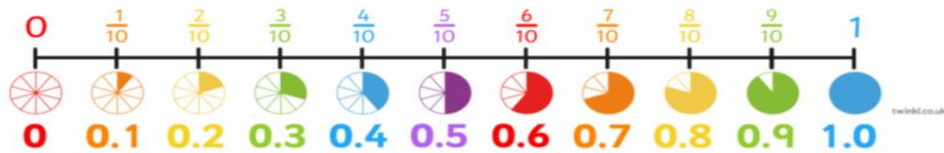
Tenths in decimals:

Be careful when working in decimals the tenths is ALWAYS in this place value column.

Hundreds	Tens	Ones	Tenths
		0	2
	1	2	3
3	1	2	9

Top tip: Draw out a place value grid to support learning.

H	T	O	Th

The decimal point never moves.

Other resources that may help support home learning:
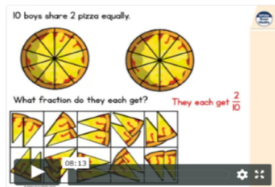
Website: White Rose Hub https://whiterosemaths.com/homelearning/year-3/

Video tutorial + supporting resources.

Home learning ➔ Year 3 ➔ Week 1 ➔ Lesson 3 - Tenths (1)

Home learning ➔ Year 3 ➔ Week 1 ➔ Lesson 4 - Counting in tenths (2)

Home learning ➔ Year 3 ➔ Week 1 ➔ Lesson 5 - Tenths as decimals (3)

Website: Snappy Maths http://www.snappymaths.com/counting/fractions/interactive/tenthsint/tenthsint.htm

Recognising tenths.

Some children have played this before, it helps practice the skill of identifying tenths within shapes.

Start by giving yourself more time, the more confident you become, the less time you will need.

Recognising Tenths Interactive Mad Maths

Answer as many questions as you can. Use the 'Enter' key or press 'Go' to submit each answer. Your time starts after you answer the first one.

Timer: ○ 10 minutes ○ 5 minutes ○ 3 minutes ● 1 minute

Time Remaining: Time

How much is shaded?
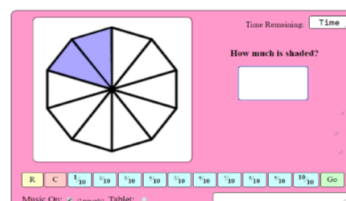
Q1. Copy and complete these sequences:

0.2   0.3   ___   0.5   ___   ___   0.8

7.3   7.2   7.1   ___   6.9   ___   ___

10.7   ___   ___   11   ___   11.2   ___

1.2   ___   1.6   1.8   ___   2.2   ___

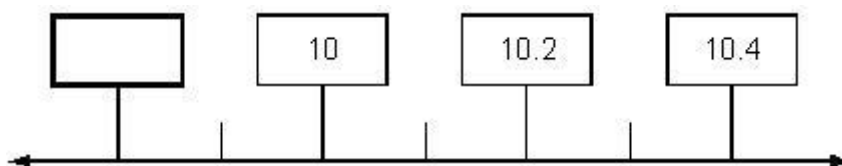**Q2.** How many pairs of decimals and fractions can you spot?

Write them neatly in you booklet. I wonder if you can get them all....

E.g $0.1 = \frac{1}{10}$

Fraction Pairs: Tenths

| 0.5 | 0.7 | $\frac{3}{10}$ | $\frac{2}{10}$ | 0.2 | $\frac{7}{10}$ |

| $\frac{9}{10}$ | 0.8 | $\frac{5}{10}$ | 0.3 | 0.9 | $\frac{8}{10}$ |

Q3. Write in the **missing** number on this number line.

| | 10 | 10.2 | 10.4 |

Q4. Write these fractions in descending order.

$$0.6 \qquad \frac{3}{10} \qquad 0.2 \qquad \frac{9}{10}$$

smallest $\qquad\qquad\qquad\qquad$ largest

Q5. Write the missing fractions in your booklet.

$$\frac{9}{10} \qquad \frac{7}{10} \qquad \underline{} \qquad \frac{3}{10} \qquad \underline{}$$

Q6. Look at this number.

$$46.3$$

Write down the value of the 3.

$$\frac{3}{100} \qquad 3 \qquad \frac{3}{10} \qquad 30$$

Q7. Sam cuts a pizza into ten equal pieces.

He eats one piece.

What fraction of the pizza does he have left?

Q8. Can you compare these fractions and decimals?

Using < > =, write your answers neatly in your booklet.

$$\frac{2}{10} \qquad 0.8$$

$$0.5 \qquad \frac{3}{10}$$

$$\frac{9}{10} \qquad 0.7$$

$$0.3 \qquad \frac{5}{10}$$

Q9. Look at this carefully, write down the answer in your booklet.

Remember to use the reasoning skills that we have been practising.

Odd One Out

Which is the odd one out?
Explain your answer.

.

Q10.   **Challenge time!**   (Optional)

Look back at Q2.

Can you create your own *fraction pairs game*?

You can be creative with this challenge, you can do this in your books, on paper, on the computer or you may even have a surprise way to create this game!

Remember to check with your adult first! Always be safe.

You can use any of your fraction knowledge to create the game:

E.g.   Tenths Pairs   Equivalent pairs

You can use shapes, number lines, fractions, words or decimals.

If you would like to share your game – your adults can email it to school to say we have permission to post on the website/app and share it with others to play.

(Please do not write your name on the game if you would like it on the website).

Quick Guide

To find a fraction of a set of objects you need to:

Step one: find the total number of objects – this will provide the denominator for your fraction. The total amount of objects = 1 whole.
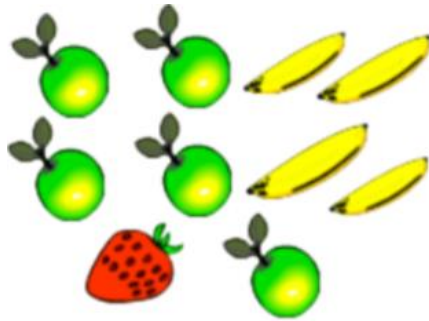
There are 10 objects in total.

This means ten objects make a whole.

So the fraction will be spilt into tenths.

The denominator will be:

$$\overline{10}$$

Step two: find the amount of objects you are wanting to calculate as the fraction – this will provide the numerator.

To work out the fraction of the bananas in this set of objects you need to count how many bananas in total.

This will be the numerator.

So the fraction of bananas in this set of objects will be:

$$\frac{4}{10}$$

Other resources that may help support home learning:

Website: White Rose Hub https://whiterosemaths.com/homelearning/year-3/

Video tutorial + supporting resources.

Home learning ➜ Year 3 ➜ Week 2 ➜ Lesson 2 - Fractions of a set of objects (1)

Home learning ➜ Year 3 ➜ Week 2 ➜ Lesson 2 - Fractions of a set of objects (2)

Home learning ➜ Year 3 ➜ Week 2 ➜ Lesson 2 - Fractions of a set of objects (3)

Q1. What fraction of the flowers are blue?
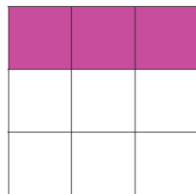

Q2. Here are the vegetables collected today.

What fraction of the vegetables are onions?

Q3. Write your answer neatly in your booklet.

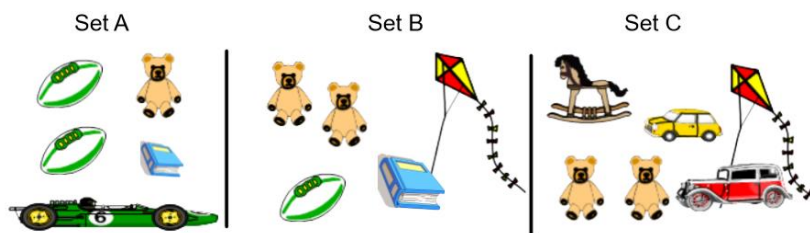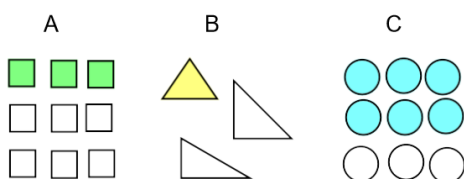True or false? Miss Briscoe has shaded three ninths of the shape.

Prove your answer.

Top tip: when working with shapes and objects, work them out as a fraction, this will help you solve it!
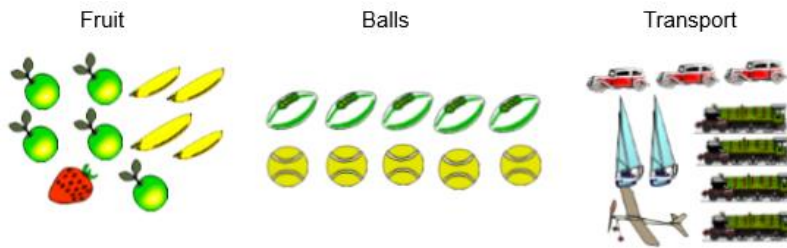
Q4. Here are some sets of toys.

Two fifths of Lucy's toys are teddies. Which set of toys belongs to Lucy?

Set A   Set B   Set C

Q5. Look at the objects below. Which represents two thirds of nine?

A   B   C

Q6. Which set of objects does not represent two fifths of ten?

Fruit   Balls   Transport

Q7. Draw a set of objects that represents three quarters of 24.

Q8. Stefan has a bag that contains 3 blue marbles and 5 red marbles only.
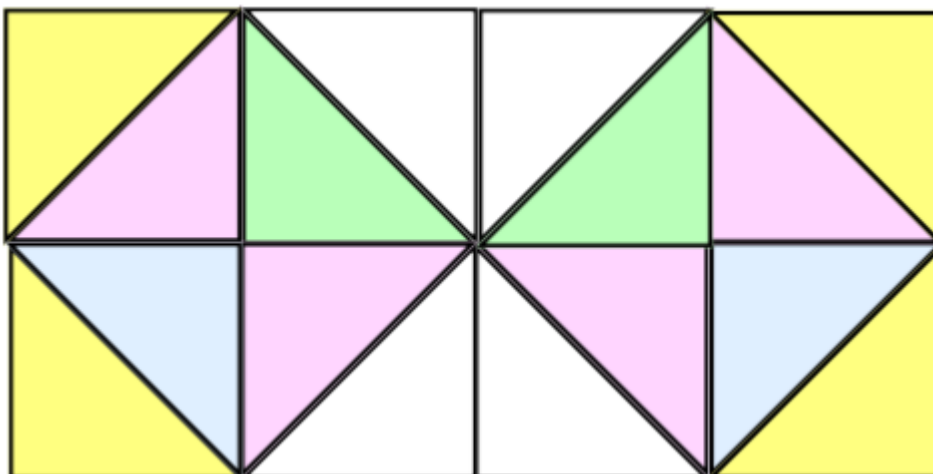
What fraction of the marbles in the bag are blue?

Stefan adds one blue marble and one red marble to the bag.

What fraction of the marbles in the bag are blue now?

Q9. I have created a pattern.

True or false? My pattern shows one quarter of sixteen.

Explain how you know.

Top tip:

Solve one quarter of sixteen first.

Using your fraction knowledge, what else can you tell me about my pattern?

Q10.

Challenge time!

Look back at Q5, Q6 and Q8

Can you create a representation of these fractions:

Hard   Harder   Hardest

$$\frac{1}{3} \text{ of } 9 \quad \Big| \quad \frac{4}{5} \text{ of } 20 \quad \Big| \quad \frac{1}{8} \text{ and } \frac{2}{4} \text{ of } 24$$

Here are some ideas:

- Use objects to build a pattern
- Paint/draw a pattern
- Be creative and create a pattern

Always check with your adults to make sure you are using suitable resources

If you would like to share your challenge, your adults can email it to school to say we have permission to post on the website/app and share it with others. (Please do not write your name on the game if you would like it on the website/app).

Quick Guide

We vocalise this skill:

"We divide by the denominator then multiply by the numerator."
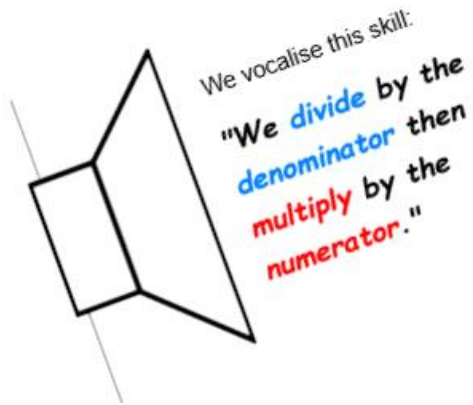
We have briefly looked at this during fluency sessions.

There is also a video tutorial for this skill at the bottom of the page to support home learning.

Unit fraction	Non unit fraction

Unit fraction

$x \quad \dfrac{1 \text{ of } 18}{3} \div$

$= 6$

Step 1: Divide by the denominator

$18 \div 3 = 6$

Step 2: Multiply by the numerator

$6 \times 1 = 6$

Answer: $\dfrac{1}{3}$ of $18 = \underline{\mathbf{6}}$

Non unit fraction

$x \quad \dfrac{5 \text{ of } 40}{8} \div$

$= 5$

Step 1: Divide by the denominator

$40 \div 8 = 5$

Step 2: Multiply by the numerator

$5 \times 5 = 25$

Answer: $\dfrac{5}{8}$ of $40 = \underline{\mathbf{25}}$

Other resources that may help support home learning:
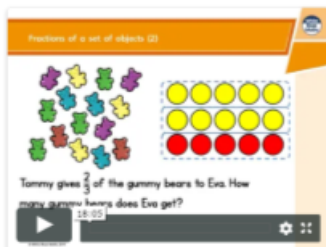
Website: White Rose Hub https://whiterosemaths.com/homelearning/year-3/

Video tutorial + supporting resources.

Home learning → Year 3 → Week 2 → Lesson 2 - Fractions of a set of objects (1)

Home learning → Year 3 → Week 2 → Lesson 2 - Fractions of a set of objects (2)

Home learning → Year 3 → Week 2 → Lesson 2 - Fractions of a set of objects (3)

Complete the challenges below into your work booklet. For most questions, you can just show your working out and your answer.

Q1. Can you crack the code and work out the fraction vocab?

Show any working out in your booklet.

Code Breaker

A	B	E	G	H	M	N
9	1	6	15	3	12	7
O	Q	R	S	T	U	Z
4	28	24	10	14	8	19

$\dfrac{1}{5}$ of 35 ____

$\dfrac{3}{5}$ of 40 ____

$\dfrac{1}{8}$ of 64 ____

$\dfrac{3}{9}$ of 27 ____

$\dfrac{1}{4}$ of 48 ____

$\dfrac{2}{3}$ of 21 ____

$\dfrac{2}{8}$ of 24 ____

$\dfrac{2}{5}$ of 10 ____

$\dfrac{3}{4}$ of 32 ____

Q2. What is three fifths of £45?

Q3. Would you rather have:

Three eights of £32   **or**   *four fifths of £45?*

Q4. This rope is 24cm long. (Not to scale).

I cut $\frac{2}{8}$ off. How much rope is left?

Q5. Can you work out the missing numbers?

Write the full number sentences in your booklet.

Top tip: Start with what you know! $\frac{1}{5}$ of 25 = 5

What do you need to divide 50 by to get 5?

Fill in the Blanks

$\frac{1}{3}$ of 60 = $\frac{1}{4}$ of ☐

$\frac{1}{☐}$ of 50 = $\frac{1}{5}$ of 25

Q6. Chen wants to shade one quarter of this shape.

How many triangles does Chen need to shade?
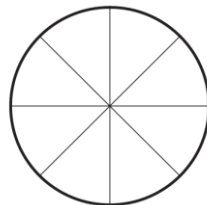
Q6. Which is bigger?

$\frac{2}{5}$ of 50   or $\frac{2}{5}$ of 40

Q7. James has £30.

He spends 2/3 of it.

How much does he have *left?*

Q8. Miss Briscoe says,

"$\frac{2}{5}$ of 30 is 20. I know this because all multiples of five end in 5 and 0."

Do you agree/disagree? Explain why.

Think about: Has she solved this problem correctly? Has she used the correct evidence to support her answer?

Q9. Sarah has a packet of balloons.

This is a multi- step problem:
Step 1: How many balloons are in the packet altogether?
Step 2: Work out one quarter.
Step 3: Compare your answer to the amount of red balloons.
Step 4: Explain your method.

The contents of the packet are

5 red balloons
5 blue balloons
10 yellow balloons

Sarah says,   *'One-quarter of the balloons are red'.*

Is Sarah correct?
Explain how you kno

Q10.   **Challenge time!**   (Optional)

Look back at Q1.

Can you create your own *fraction code breaker?*

Make sure you check it works! *If you would like* to share your codebreaker – your adults can email it to school to say we have permission to post on the website/app and share it with others to solve. (Please do not write your name on the game if you would like it on the website/app).

Quick Guide

Whatever you do to the denominator, you <u>MUST</u> to do the same to the numerator.
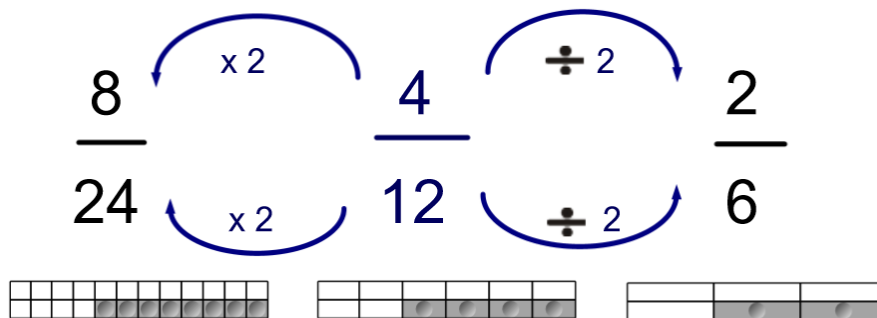**(multiplication or division)**

E.g   *Equivalent = Equal*

x 2

$$\frac{5}{6} = \frac{10}{12}$$

x 2

$$\frac{4}{12} = \frac{1}{3}$$

÷ 4

÷ 4
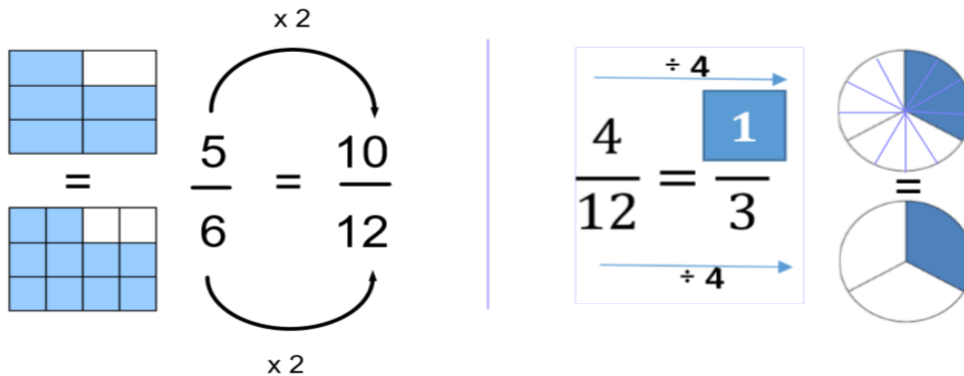
Top tip: Shapes can help identify equivalent fractions. You can see that the fraction EQUALS the same amount because the same amount of each shape is shaded.

The digits in equivalent fractions can be bigger or smaller, however the fraction is always EQUAL and represents the same amount.

$$\frac{8}{24}$$ x 2 $$\frac{4}{12}$$ ÷ 2 $$\frac{2}{6}$$

x 2   ÷ 2

Other resources that may help support home learning:

Website: White Rose Hub https://whiterosemaths.com/homelearning/year-3/

Video tutorial + supporting resources.

Home learning ➔ Year 3 ➔ Week 2 ➔ Lesson 5 - Equivalent fractions (1)

Home learning ➔ Year 3 ➔ Summer term 1 ➔ Lesson 1 – Equivalent fractions (2)

Home learning ➔ Year 3 ➔ Summer term 1 ➔ Lesson 2 - Equivalent fractions (3)

Website: Topmarks https://www.topmarks.co.uk/
Search.aspx?q=fraction%20matcher

Fraction Matcher - Equivalent fraction game

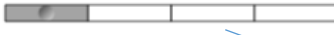Search *Fraction Matcher* on Top Marks it should be the first one available.

The children have played this before, it helps practice the skill of identifying equivalent fractions in different formats. Start from level 1 and work way to next levels when confident.
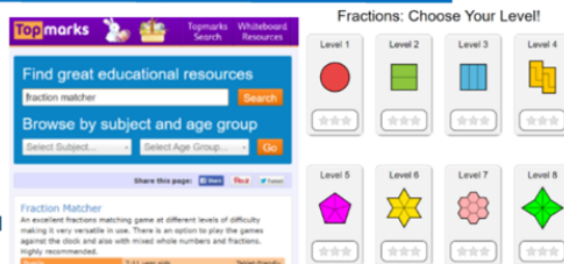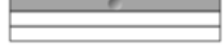
Complete the challenges below into your work booklet. For most questions, you can just show your working out and your answer.

Q1. Can you match up the pairs of equivalent fractions? Write these pairs neatly in your book. E.g $\frac{1}{4} = \frac{2}{8}$
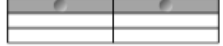
$$\frac{1}{4} \qquad \frac{1}{3} \qquad \frac{1}{2}$$

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

Q2. Copy and complete these neatly in your booklet.

E.g $\quad \frac{1}{3} = \frac{\boxed{4}}{12}$ (x4, x4)

$$\frac{1}{8} = \frac{\boxed{}}{16} \qquad \frac{1}{5} = \frac{\boxed{}}{10} \qquad \frac{2}{3} = \frac{\boxed{}}{6}$$

Q3. Copy and complete these neatly in your booklet.
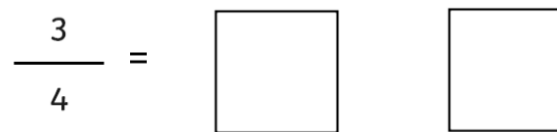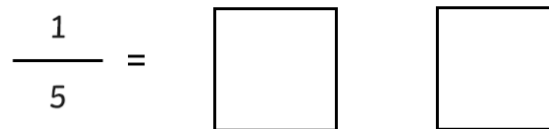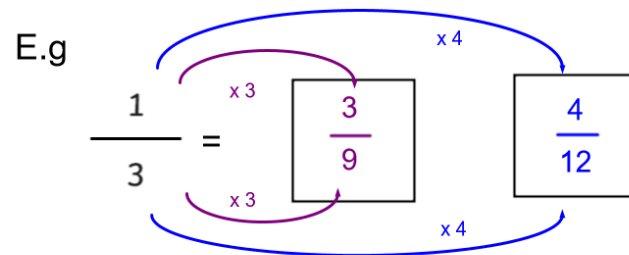
E.g $\quad \frac{2}{24} = \frac{\boxed{1}}{12}$ (÷2, ÷2)

$$\frac{16}{20} = \frac{\boxed{}}{5} \qquad \frac{10}{12} = \frac{5}{\boxed{}} \qquad \frac{8}{16} = \frac{1}{\boxed{}}$$

Q4. Can you find two equivalent fractions for the each of the fractions below?

E.g

$$\frac{1}{3} = \boxed{\frac{3}{9}} \quad \boxed{\frac{4}{12}}$$

x 3   x 3   x 4   x 4

$$\frac{1}{5} = \boxed{} \quad \boxed{}$$

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

$$\frac{5}{12} = \boxed{} \quad \boxed{}$$
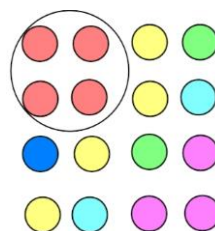
Q6. Which shapes have one half shaded?

A   B   C

D   E
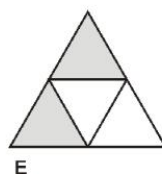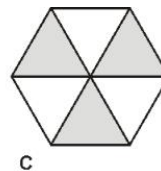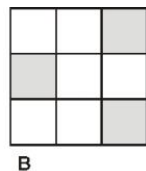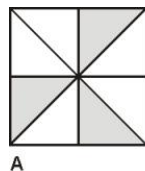
Top tip: Work each shape/ set of objects out as a fraction first.

Q7. The objects below represent $\frac{3}{12}$. Can you write an equivalent fraction that these objects represent?
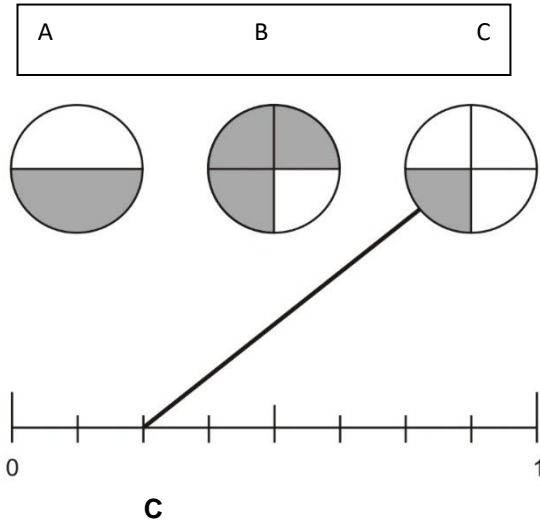

Using you fraction knowledge, what else can you interpret from this set of objects?

Q7. Draw a neat line in your books that is 8cm long.

Can you label your number line with fraction A B C?

● *Top Tip: Look at which fractions the shapes represent. Work out the intervals on your number line.*

| A | B | C |

0 ─────────────── 1

C

Q8. In one of our maths lessons we created a rule:

*You can always spot an equivalent of one half, because **the numerator is always half of the denominator.***

Can you use this rule to help identify which fractions below are equivalent to one half.

Write these neatly in your book.

$$\frac{3}{6} \quad \frac{5}{15} \quad \frac{7}{14} \quad \frac{9}{10} \quad \frac{5}{10} \quad \frac{10}{20} \quad \frac{12}{22} \quad \frac{2}{4}$$

Q9.

Holly says,

'One-third of this shape is shaded'.

Is Holly correct?

Explain how you know.

Challenge time! (Optional)

Can you order equivalent fractions?

Can you put all of the fractions into the grid so that every row
and column is in ascending order?

Top tip: Change all fractions into twelfths.

Smallest   Largest

Largest

$$\frac{1}{2} \quad \frac{3}{4} \quad \frac{1}{4} \quad \frac{5}{6} \quad \frac{1}{6} \quad \frac{2}{3} \quad \frac{1}{3} \quad \frac{7}{12} \quad \frac{11}{12}$$

You are going to need
to use your fantastic
resilience to solve this
challenge. It took me a
while!

If you would like to share your working – your adults can email it to school to say
we have permission to post on the website/app and share it with others to see. (Please do
not write your name on the game if you would like it on the website/app).

Challenge 11: Order and Compare

Looking a little deeper at this skill

Quick Guide

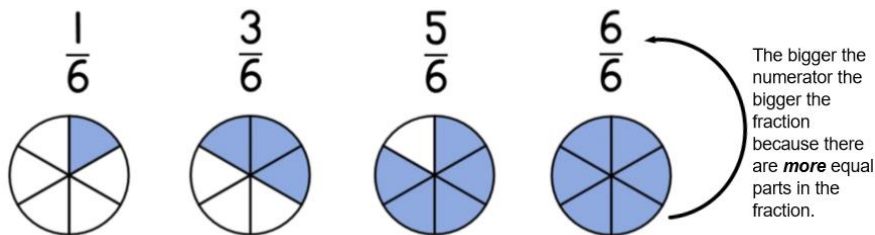**Unit Fractions – When learning about this we said:**

A pattern we noticed is that the bigger the denominator the smaller the fraction when investigating unit fractions.

We can use this knowledge to help order unit fractions.

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

The bigger the denominator the smaller the fraction because the whole is split into **more** equal parts.
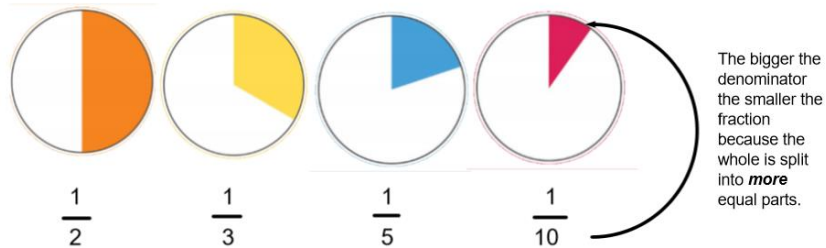
Non Unit Fractions – When learning about this we created a rule:

When comparing non unit fractions, if the denominator is the same, the bigger the numerator the bigger the fraction.

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

The bigger the numerator the bigger the fraction because there are **more** equal parts in the fraction.

Other resources that may help support home learning:

Website: White Rose Hub https://whiterosemaths.com/homelearning/year-3/

Video tutorial + supporting resources.

Home learning ➔ Year 3 ➔ Summer term 1 ➔ Lesson 3 - Compare Fractions

Home learning ➔ Year 3 ➔ Summer term 1 ➔ Lesson 4—Ordering Fractions

Home Learning ➔ Year 3 ➔ Week 2　Step 6 - Fractions on a number line
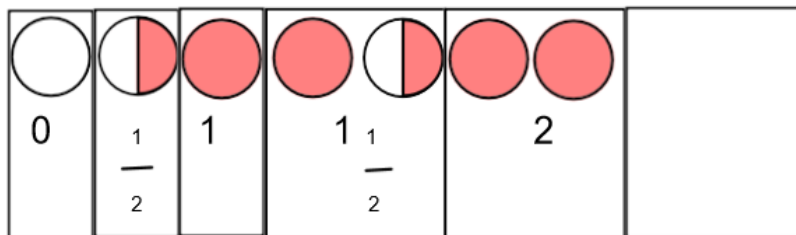
Q1.   Write these numbers in ascending order.

$$\frac{1}{2} \qquad \frac{1}{4} \qquad \frac{1}{8} \qquad \frac{1}{5}$$

Q2.   Write these numbers in descending order.

$$\frac{5}{7} \qquad \frac{2}{7} \qquad \frac{6}{7} \qquad \frac{3}{7}$$
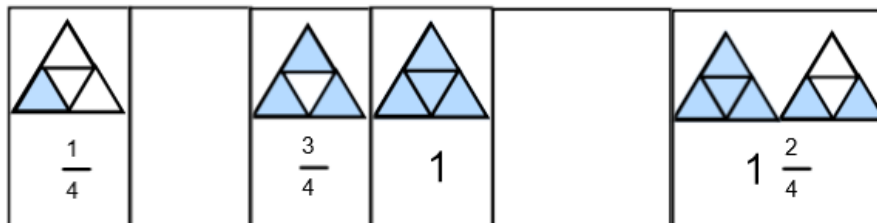
Q3.   Can you work out the missing fraction?

Write the fraction sequence neatly in your booklet.
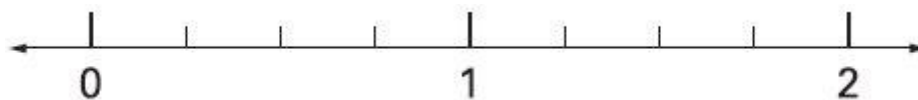

Q4.   Can you work out the missing fraction?
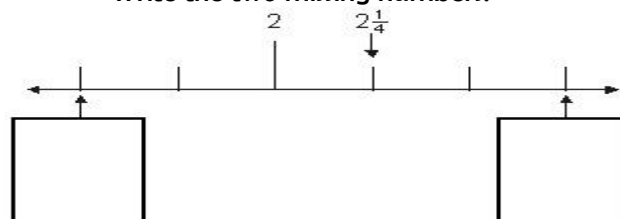
Write the fraction sequence neatly in your booklet.

Q5.   Draw an arrow (↓) on the number line to show $1\frac{3}{4}$

Q6.   Here is part of a number line.

Write the two missing numbers.

Q7. Write the **two** missing numbers in this sequence.

$$\frac{1}{4} \qquad \frac{1}{2} \qquad \frac{3}{4} \qquad 1 \qquad \boxed{} \qquad 1\frac{1}{2} \qquad \boxed{} \qquad 2$$

Q8. Write the fraction sentences neatly in your booklet.

Write the correct sign **<**   **=**   or   **>**   in each box to make these sentences correct.

$$\frac{3}{10} \qquad \boxed{} \qquad \frac{5}{10}$$

$$\frac{1}{3} \qquad \boxed{} \qquad \frac{1}{6}$$

$$\frac{2}{4} \qquad \boxed{} \qquad \frac{1}{2}$$

Q9. Can you spot which is the largest fraction?

Which is the smallest fraction?

How do you know?

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

Q10.   **Challenge time!**   (Optional)

Look back at Q3, Q4, Q7.   **Can you create your missing fraction sequence?**

Make sure you check it's right.

If you would like to share your sequence – your adults can email it to school to say we have permission to post on the website/app and share it with others to solve.

(Please do not write your name on the game if you would like it on the website/app).
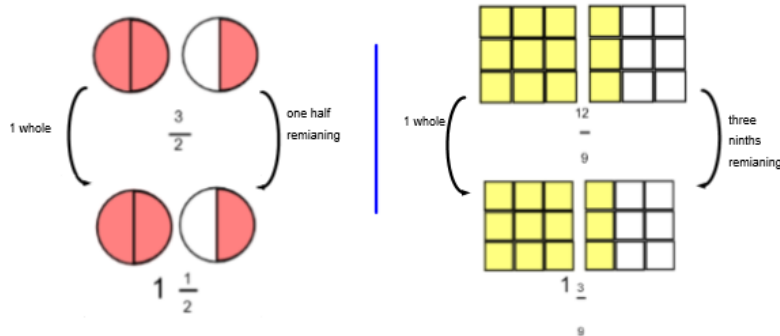
Quick Guide

When adding and subtracting fractions and with the same denominator within one, you only add the numerators <u>the denominator stays the same</u>. E.g.

Addition +

$$\frac{3}{10} + \frac{3}{10} = \frac{6}{10}$$

Subtraction -

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

When adding and subtracting fractions with the same denominator where the answer is more than one, will create an improper fraction (when the fraction is more than a whole). E.g.

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

$$\frac{6}{9} + \frac{6}{9} = \frac{12}{9}$$
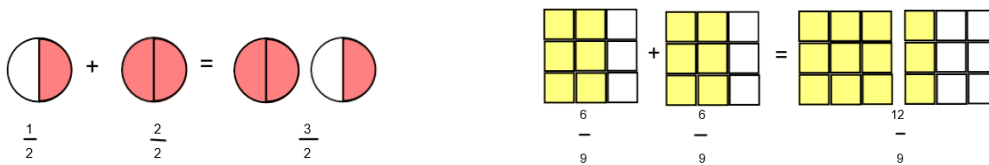
You can convert improper fractions to mixed fractions. You must look at how much makes a whole and how much is left over. E.g.

1 whole ($\frac{3}{2}$) one half remianing

$1\frac{1}{2}$

1 whole ($\frac{12}{9}$) three ninths remianing

$1\frac{3}{9}$

Other resources that may help support home learning:

Website: White Rose Hub https://whiterosemaths.com/homelearning/year-3/

Video tutorial + supporting resources.

Home learning ➔ Year 3 ➔ Summer term 1 ➔ Lesson 5 - Add Fractions

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Website: Snappy Maths

Adding fractions with same denominator within 1: http://www.snappymaths.com/counting/fractions/interactive/addfracsdint/addfracsdint.htm

Subtracting fractions with same denominator within 1: http://www.snappymaths.com/counting/fractions/interactive/subfracsdint/subfracsdint.htm

Adding and subtracting fractions with same denominator within 1: http://www.snappymaths.com/counting/fractions/interactive/addsubfracsdint/addsubfracsdint.htm

Q1. Can you solve the missing fractions? Write the whole number sentence in your booklet and circle the missing fraction.

$$\frac{8}{12} + \boxed{} = \frac{3}{12}$$
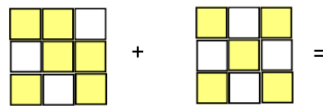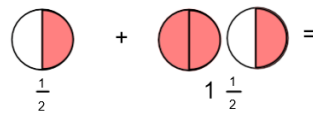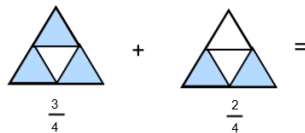
$$\boxed{} - \frac{3}{10} = \frac{2}{10}$$

$$\boxed{} + \frac{5}{16} = 1$$

$$\frac{5}{8} - \boxed{} = \frac{2}{8}$$

> Think about: which strategy do we use to solve missing number problems?

Q2. Write the answers in your booklet.

$$\frac{2}{3} + \frac{2}{3} = \frac{4}{3} \text{ or } 1\frac{1}{3}$$

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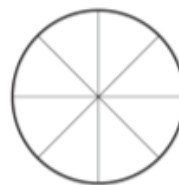

$$\frac{1}{2} + 1\frac{1}{2} =$$
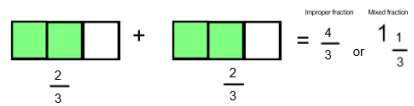
Q3. Write down the answer neatly in your booklet.
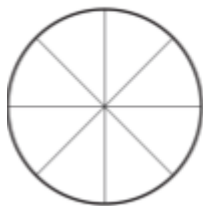
Here is a pizza cut into 8 equal slices.

Joseph eats one slice and Aziz eats 2 slices.

What fraction of the pizza is left?

> Top tip: Draw out the shape in your book and annotate as you go.

Q4. Write down the answer neatly in your booklet.

Here is a cake cut into 8 equal slices.

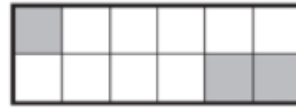Isla eats 4 slices and Rory eats one slice.

What fraction of the cake remains?

Q5. Write down the answer neatly in your booklet.

Lilly wants to shade five twelfths of this shape .

She has shaded 3 squares.

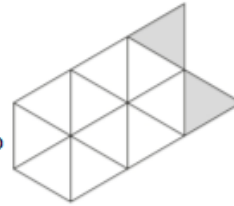How many more squares must she shade?

Q6. Write down the answer neatly in your booklet.

Sandra wants to shade 1/3 of this shape.

She has shaded 2 triangles.

How many more triangles does she need to shade so that 1/3 is shaded?

Q.7 Ben cuts a pizza into 8 equal pizzas.

Ben eats $\frac{5}{8}$ and Sue eats $\frac{1}{8}$ of the pizza.

What fraction of the pizza is left?

Q.8 There is 600ml of water in the jug.

Sophie pours out some water.

She has 200ml left.

What fraction did she pour out?

Q9. Miss Patterns plants 3 more flowers.

She says, "7 ninths of the flowers will be blue."

Is she correct? Explain why.

Q10. **Challenge time!** (Optional)

Look back at Q9. **Can you create your own reasoning question?**

Make sure you check it makes sense! Remember some key vocabulary:

Prove it.   *Explain why.*   *Agree/disagree*   *True or false?*

Explain how you know...   *Is there a pattern?*   *What did you notice?*

If you would like to share your question – your adults can email it to school to say we have permission to post on the website/app and share it with others to answer (Please do not write your name on the game if you would like it on the website/app).