



# Year 3

## Remote Learning

### Maths- Week 15

#### Overview of activities, learning and progression - Information for parents

We will be continuing with our fractions unit this week.

These are the objectives that we will be focusing on this week:

- To solve a range of problems involving fractions.
- Recognising and identifying equivalent fractions.
- Comparing and ordering fractions.

#### Printing packs for you

If you would like to have a paper copy of any of the activities that we include this week please let us know, we are happy to print off packs and leave them at the office for you to collect. [year3@coleridgeprimary.net](mailto:year3@coleridgeprimary.net)

#### Lesson overview

All the lessons this week have an aspect of teaching, which uses a mixture of online recorded video lessons from White Rose, as well as videos from Year 3 teachers. The children will need to pause at points to complete tasks which are attached, but the lessons contain the 'teaching' part and the children will be asked to do little tasks and answer questions throughout. They will usually then have an activity to do on their own at the end of the session and then they can mark this using the answer sheets.

Some children will be able to follow along pretty independently but others may need some support, or for you to go over key parts. In class we would differentiate by the questions we ask, the resources and support we provide. Clearly we can't do this remotely in the same way but we have tried to include different levels of questions and challenges where possible.

The learning does get trickier this week introducing equivalent fractions, and asking the children to compare and order fractions. This builds on the division learning from a few weeks as well as the fraction lessons, but some children do find this tricky. If your child struggles with these concepts try and use practical resources to help them. Some children will be able to use known facts to help them but others will need to get objects and resources to help them, such as the fraction wall and wheels.

If you feel your child is really struggling it would be worth following the Year 2 fraction curriculum learning. This is on our website, under remote learning, Year 2. Look for week 8 and then move onto their week 9. All the resources you will need are saved as attachments.

## **Useful website links and other resources to support the learning this week**

Online games/activities:

**Football fraction quiz**

<https://www.bbc.co.uk/bitesize/topics/zhdwxnb/articles/zryj7ty>

**Equivalent fractions space game**

<https://www.mathplayground.com/Triplets/index.html>

**Equivalent fractions matching games** (Top marks also has a wide range of other fraction games)

[http://www.sheppardsoftware.com/mathgames/fractions/memory\\_equivalent1.htm](http://www.sheppardsoftware.com/mathgames/fractions/memory_equivalent1.htm)

**Online learning**

This week we have used teaching videos from the White Rose website, along with short videos of Miss Driver teaching and explaining a few of the activities. The White Rose website is a great website, so you might want to explore it for other maths topics that your child may have had difficulties with.

## Introduction

Watch the following video of Miss Driver introducing this week's learning

<https://youtu.be/Ws5KrW1UC3s>

## Lesson 1 - Fractions of sets of objects

### Starter

Let's remind ourselves what a fraction is. There are 2 definitions that describe what a fraction is, can you remember them?

- 1)
- 2)

Can you match the written fractions with the number fraction?

Check **ANSWER SHEET** for answers.

$\frac{1}{3}$	two fifths
$\frac{3}{4}$	one half
$\frac{1}{2}$	one third
$\frac{5}{8}$	three quarters
$\frac{2}{5}$	five eighths

### Teaching

Watch the following White Rose video (Week 2, Lesson 4)

<https://whiterosemaths.com/homelearning/year-3/>. Make sure you have a pencil and some paper to work out some answers during the video. Pause the video at any point to give you time to calculate the correct answers.

Let's recap what we have learnt about fractions so far. Have a go at answering the starter questions on the video. The answers will follow afterwards.

- 1) Find  $\frac{1}{3}$  of the number of oranges.



- 2) Write seven tenths as a decimal.

- 3) Add 3 m and 20 cm to 2 m and 55 cm.

- 4) Find the sum of 462 and 229

### Activity 1

Complete **Fractions of a set of objects (3) sheet**. Both the worksheet and the **ANSWER SHEET** are attached separately

**Fractions of a set of objects (3)**

1 In a class of 32 children, three eighths are girls. How many children are boys?

2 Alex is taking part in a 10 km race. She has run two fifths of the race. What distance does she have left to run?  km

3 Filip has £3 and 20p. He spends half of his money. How much does he have left? £  and  p

4 Teddy opens a bag of cherries and puts  $\frac{1}{3}$  on a plate. How many cherries were there in the whole bag?

5 Ron has £4 and 50p. He decides to share the money equally between himself and his two sisters. How much money will each child get? £  and  p

6 A bag of potatoes weighs 500 g. Annie's dad uses one quarter of the potatoes to make a shepherd's pie. What is the mass of the potatoes left in the bag?  g

7 Dexter spends one third of his money. He has these coins left. How much did Dexter spend? £  and  p

8 Eva has a bag of 20 sweets. She eats  $\frac{1}{5}$  of the sweets. She gives  $\frac{1}{2}$  of the sweets that are left to Dora and 2 sweets to her mum. How many sweets does Eva have left?

9 Whitney has a box of raisins. She eats  $\frac{1}{3}$  of the raisins and gives 3 to her brother. She has 9 raisins left. How many raisins were in the box at the start?

10 Here is a rectangle. The perimeter of the rectangle is less than 30 cm. Side  $a$  is one half of the length of side  $b$ . a) Complete the table to show the different possible integer lengths of side  $a$  and side  $b$ .

Length of side $a$	Length of side $b$	Perimeter
1 cm	2 cm	6 cm

b) What are the longest possible integer lengths of side  $a$  and  $b$ ? side  $a$  \_\_\_\_\_  
side  $b$  \_\_\_\_\_

Dexter says: I think  $a$  can be 5 cm.

Talk to a partner about why Dexter is wrong.

**Activity 2**  
Complete problem solving activity:  
<https://nrich.maths.org/1040> (Document is attached separately if you would like to print it out).

Make sure you show your working out, this way if you make a mistake you can see exactly where you went wrong.

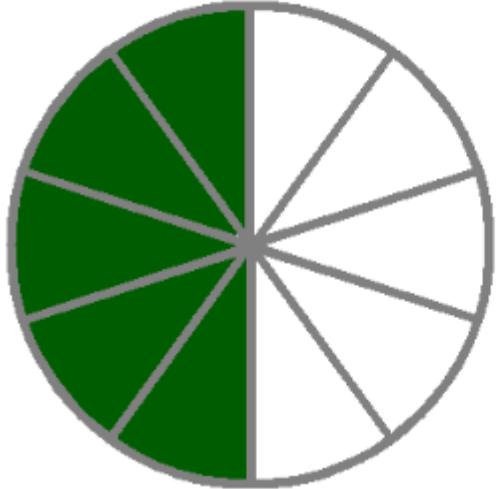
Check working out and answers on the **ANSWER SHEET**.

## Lesson 2 - Equivalent Fractions

### Starter

Watch the link of Miss Driver explaining and teaching the starter activity and activity 1.  
<https://youtu.be/mUnUBJUmFLA>

What fraction of the circle is shaded? Explain your reasoning.



**Equivalent Fractions** are fractions which have the same value, even though they may look different.

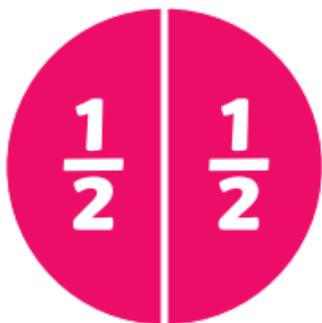
There may be more than one answer. Look carefully at the fraction wheel, does it look similar to any other fractions?

Check the **ANSWER SHEET** afterwards for answers.

### Activity 1

Look at the fraction wheels (attached separately)

How many quarters are equivalent to a half?



What other fractions are equivalent to a  $\frac{1}{2}$ ?

If you have a printer you can cut the parts out and layer them on top of the half. Not all the fractions will fit perfectly.

What do you notice about the fractions that are equivalent to a half?

Do you start to notice a pattern?

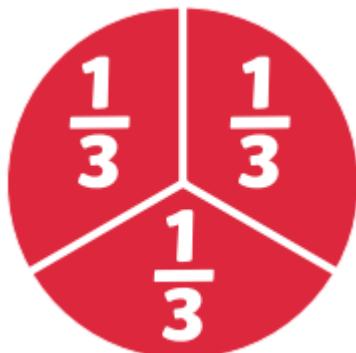
What happens to the denominator and the numerator?

Now look at the fraction  $\frac{1}{3}$ . What fractions are equivalent to  $\frac{1}{3}$ ?

Do you start to notice a pattern?

What happens to the denominator and the numerator?

Look at the **ANSWER SHEET** for guidance and answers.

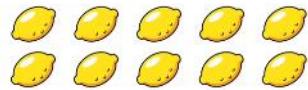


## Teaching

Watch the following White Rose video (Week 2, Lesson 5 - Equivalent Fractions 1) <https://whiterosemaths.com/homelearning/year-3/>. Make sure you have a pencil and some paper to work out some answers during the video. Pause the video at any point to give you time to calculate the correct answers.

Let's recap what we have learnt about fractions so far. Have a go at answering the starter questions on the video. The answers will follow afterwards.

- 1) Find  $\frac{2}{5}$  of the number of lemons.



- 2) Write 0.3 as a fraction.

- 3) Draw a line 65 millimetres long.

- 4) What is 7 worth in the number 375?

## Activity 2

Complete **Equivalent fractions (1)** sheet. Both the worksheet and the **ANSWER SHEET** are attached separately.

The **fraction wall** is attached separately to support you if needed.

## Discussion

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

What could the missing numbers be?

The equal sign is another way of showing an equivalent fraction.

$$\frac{1}{2} = \frac{4 - ?}{? \times 2}$$

Use the fraction wall to support you if needed.

Check **ANSWER SHEET** for answers.

### Lesson 3 - Equivalent Fractions

#### Starter

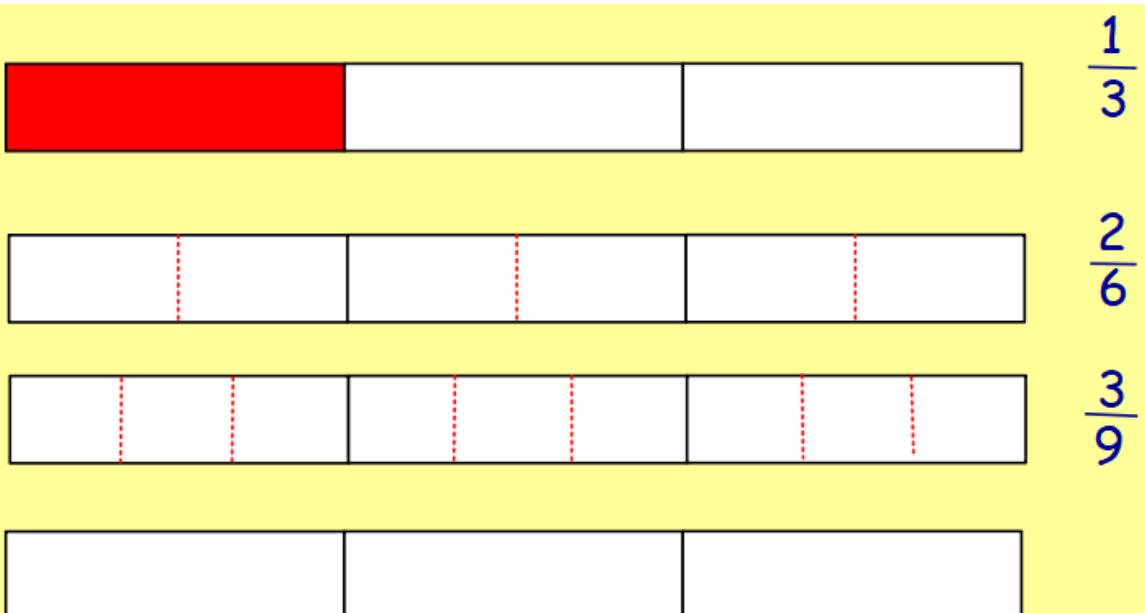
1) What does equivalent fraction mean?

2)

Eddie thinks this picture shows  $\frac{4}{6}$ , Arvin says it shows  $\frac{2}{3}$ . Who is right? Why do you think that?



3)



Alice used a diagram to help her find equivalent fractions. What was she doing?

What should she do to find the next one?

Answers for starter activities are on the **ANSWER SHEET**

## Teaching

Watch the following White Rose video  
(Summer term, Week 1, Lesson 1 - Equivalent Fractions 2)

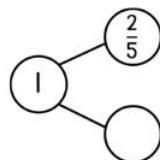
- 1) Find  $\frac{2}{5}$  of the number of lemons.



- 1) What is  $\frac{1}{4}$  of 320 g?

- 2) What is  $\frac{3}{4}$  of 320 g?

- 3) Complete the part-whole model.



- 4) Add 345 and 274 together.

<https://whiterosemaths.com/homelearning/year-3/>. Make sure you have a pencil and some paper to work out some answers during the video. Pause the video at any point to give you time to calculate the correct answers.

Let's recap what we have learnt about fractions so far. Have a go at answering the starter questions on the video. The answers will follow afterwards.

## Activity 1

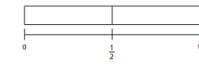
Complete **Equivalent fractions (2) sheet**. Both the worksheet and the **ANSWER SHEET** are attached separately.

The **fraction wall** is attached separately to support you if needed.

### Equivalent fractions (2)

- 1 Shade the bar models to represent the fractions.

a) Shade  $\frac{1}{2}$  of the bar model.



b) Shade  $\frac{2}{4}$  of the bar model.



c) Shade  $\frac{3}{6}$  of the bar model.

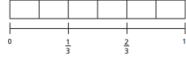


d) What do you notice?

e) Write another fraction that is equivalent to  $\frac{1}{2}$

- 2 Shade  $\frac{2}{3}$  of each bar model.

a)



b)



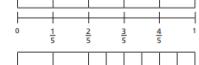
c)



d) Use your answers to parts a), b) and c) to complete the equivalent fractions.

$$\frac{2}{3} = \frac{\square}{6} = \frac{8}{\square} = \frac{\square}{15}$$

- 3 Mo is finding equivalent fractions.

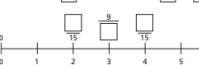
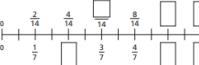


$\frac{2}{3}$  is equivalent to  $\frac{4}{6}$ .

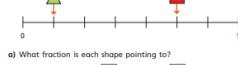
Do you agree with Mo? \_\_\_\_\_

Explain your answer.

- 4 Find the missing numbers.



- 5 Here is a number line.



a) What fraction is each shape pointing to?

=

b) A circle is halfway between the triangle and the square.

Draw the circle on the number line.

c) The circle is  $\frac{4}{21}$  pointing to

Eva says the circle is  $\frac{4}{21}$  pointing to

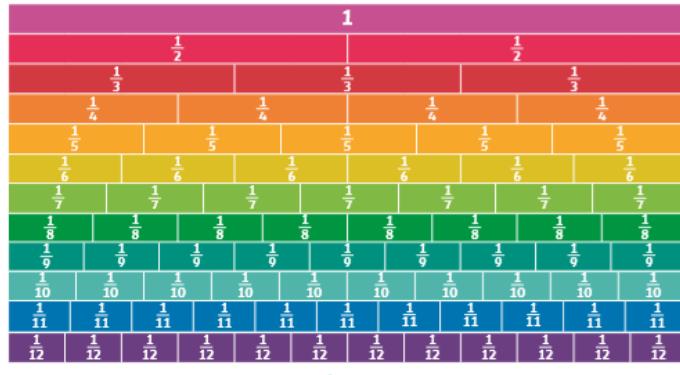
Show how you worked this out.

d) Write three equivalent fractions for each shape.



Compare answers with a partner.

## Fractions Wall



twinkl original

### Activity 2

Can you work out the equivalent fractions?

Look at the denominators, what has happened to the number?

Can you use Alice's starter method to help you?

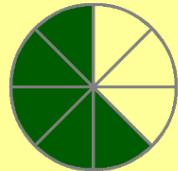
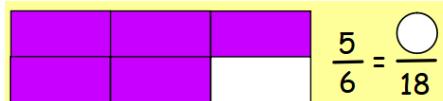
### Teaching

Let's look at the first one together:

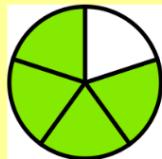
Watch Miss Driver explaining how to work out the first equivalent fraction.

<https://youtu.be/KAn9q2n9KHk>

Can you try and work out the rest?



$$\frac{5}{8} = \frac{\circ}{16}$$



$$\frac{4}{5} = \frac{\circ}{20}$$



$$\frac{3}{7} = \frac{9}{\circ}$$

### Discussion

How can we use the diagram to complete this?



?

$$\frac{2}{5} = \frac{\circ}{15}$$

**Answers available on ANSWER SHEET**

**EXTRA:** There is also a 3rd Equivalent fraction lesson on the White Rose website. Use this work as an extension piece if you think you need more practise on equivalent fractions or want to recap your learning so far.

Summer term, Week 1, Lesson 2 - Equivalent Fractions 3)

<https://whiterosemaths.com/homelearning/year-3>

## Lesson 4 - Comparing Fractions

Follow link of Miss Driver teaching and explaining the starter activity and activity 1.

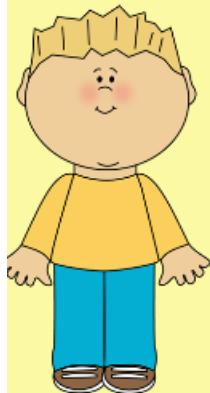
<https://youtu.be/0qH3jYeOaAA>

### Starter

Jack and Jill each had a piece of ribbon which were the same length.

Jack cut off  $\frac{1}{4}$  of his ribbon and kept that, Jill kept  $\frac{1}{2}$  of her ribbon.

Who had a bigger piece of ribbon?



## Explain your reasoning.

Check your answer on the **ANSWER SHEET**

We can write one half is bigger than one quarter like this:

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

**Remember:** the crocodile mouth always eats the larger (greater) amount!

Can you order the following fractions from smallest to biggest

Smallest	1/6	One third	1/5	One half	1/4	1/7	Bigest

### Activity 1

Try and put the correct symbol in the circle, either greater than or less than.

1)

< or >

$\frac{1}{10} \bigcirc \frac{1}{4}$

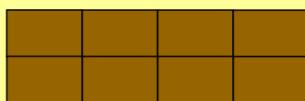
$\frac{1}{3} \bigcirc \frac{1}{6}$

$\frac{1}{5} \bigcirc \frac{1}{4}$

What fraction could go in the missing box? How many can you find?

2) What fraction is greater than  $\frac{1}{10}$  but smaller than  $\frac{1}{2}$ . Try and work this out by yourself, but if you need support use your fraction wall.

$$\frac{1}{2} > \frac{\square}{\square} > \frac{1}{10}$$



Jasiah gets  $\frac{3}{8}$  of this chocolate bar.

Tess gets  $\frac{5}{8}$  of this chocolate bar.

Who gets more? Explain how you know?

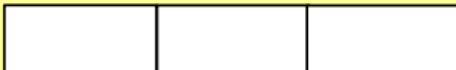
Are there other ways to get more?

When the denominators are the same, the bigger/smaller the numerator, the bigger/smaller the fraction

3)

4)

Henry has drawn this diagram to show that  $\frac{1}{5}$  is bigger than  $\frac{1}{3}$



Answers to activity 1 are on the **ANSWER SHEET**

## Teaching

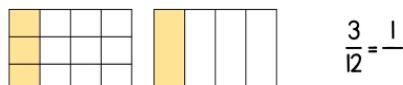
Watch the following White Rose video (Summer term, Week 1, Lesson 3 - Compare Fractions)

<https://whiterosemaths.com/homelearning/year-3/>.

Make sure you have a pencil and some paper to work out some answers during the video. Pause the video at any point to give yourself time to calculate the correct answers.

Let's recap what we have learnt about fractions so far. Have a go at answering the starter questions on the video. The answers will follow afterwards.

1) Complete the equivalent fractions.



2) Use < , > or = to compare.

$$\frac{3}{4} \text{ of } 12 \bigcirc \frac{5}{8} \text{ of } 16$$

3) Write  $\frac{7}{10}$  as a decimal.

4) Divide 48 by 8

## Activity 2

Complete **Compare Fractions sheet**. Both the worksheet and the **ANSWER SHEET** are attached separately.

**Compare fractions**

1) Write < , > or = to compare the fractions. Use the bar models to help you.

a)  $\bigcirc$  b)  $\bigcirc$  c)  $\bigcirc$  d)  $\bigcirc$

2) Here are some bar models.

a) Shade the bar models to represent the fractions.

b) Write < or > to compare the fractions. Use the bar models to help you.

a)  $\frac{1}{2} \bigcirc \frac{1}{3}$  b)  $\frac{1}{4} \bigcirc \frac{1}{3}$  c)  $\frac{1}{5} \bigcirc \frac{1}{4}$  d)  $\frac{1}{6} \bigcirc \frac{1}{5}$

The **fraction wall** is attached separately to support you if needed.

1) What could the missing numerators and denominators be? Give three examples for each.

a)  $\frac{1}{5} < \frac{\square}{5}$     $\frac{1}{5} < \frac{1}{\square}$     $\frac{1}{5} < \frac{1}{5}$

b)  $\frac{1}{5} < \frac{1}{\square}$     $\frac{1}{5} < \frac{1}{\square}$     $\frac{1}{5} < \frac{1}{\square}$

2) Jack is comparing fractions.

$\frac{1}{8}$  is greater than  $\frac{1}{4}$  because 8 is greater than 4!

3) Sort the fractions into the circles.

greater than  $\frac{1}{6}$ :  $\frac{5}{6}, \frac{1}{8}, \frac{1}{2}, \frac{2}{6}, \frac{1}{12}, \frac{3}{6}$   
less than  $\frac{1}{6}$ :  $\frac{1}{6}$

4) Complete the sentences using the word bank.  
 numerator   denominator   greater   smaller

a) When fractions have the same denominator, the greater the \_\_\_\_\_, the \_\_\_\_\_ the fraction.  
 \_\_\_\_\_, the \_\_\_\_\_ the fraction.

b) When fractions have the same numerator, the greater the \_\_\_\_\_, the \_\_\_\_\_ the fraction.

If you want to challenge yourself why not try one of the extra problem solving challenges (attached separately). There are 2 to choose from **In the Money** or **Fraction in a box**

## Lesson 5 - Ordering fractions

### Starter - Mental Maths Quiz!

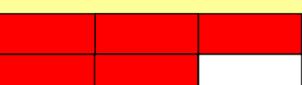
The starter for today's lesson will be a mental maths test. There are 5 levels of maths test - the more stars, the more difficult the test becomes. Choose one that you are capable of doing, but that also challenges you. You could time yourself if you wish!! If you find the test too easy or too challenging, select a different level. Good luck! (Mental maths tests and answers attached separately).

### Teaching

Follow the link to Miss Akyildiz going through the first activities. <https://youtu.be/bV8XL-bflrE>

$$\frac{2}{3} = \frac{(\quad)}{9}$$


$$\frac{3}{4} = \frac{12}{(\quad)}$$


$$\frac{5}{6} = \frac{(\quad)}{18}$$


Let's do a little bit of a re-cap/ practise of **equivalent fractions** first! Can you have a go at this?

Remember - whatever you do to the denominator, you must also do the same to the numerator and vice versa.

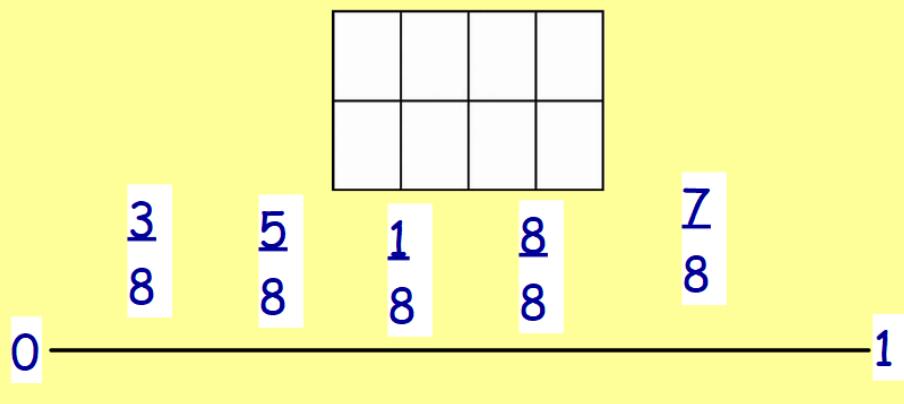
What has happened to the denominator in the first question? So what must you do to the numerator? Check your fractions wall to see if you were right.

Check your answers on the **ANSWER SHEET**.

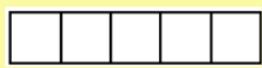
**Let's begin ordering fractions!** Have a go at this... Where would be a good place to start? What would the equivalent fraction of 1 (the whole) be in this case? How will you know where on the line you should position each fraction?

### Can you put these fractions in order?

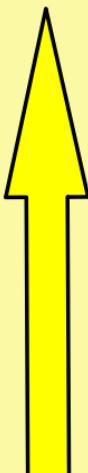
Are there any missing? Where would they go?



Can you put these fractions in order from smallest to largest?



greatest



smallest

How will you start?

What would the whole look like?

Can you write the fraction to represent each of these?

Are there some fractions missing? Where would you place them?

Check your answers on the **ANSWER SHEET**.

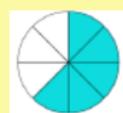
Can you put these fractions in order from smallest to greatest?

What would the whole look like?



greatest

What fractions are missing?

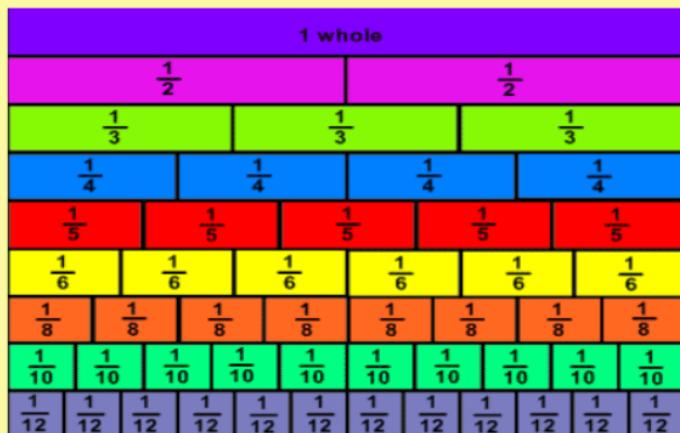
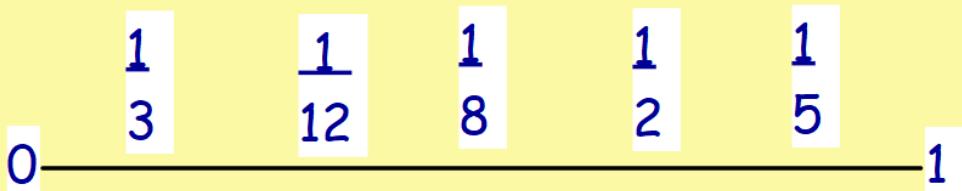


smallest

Can you also write the fraction to represent each of these?

Check your answers on the **ANSWER SHEET**.

Can you order these unit fractions from smallest to largest?



This is a bit tricky at first glance because the denominators are all different! But we can still compare these unit fractions and order them by size. How would you start?

**Key point to think about here: what do you know about the size of the fraction as the number in the denominator gets larger?**

**Don't just order the fractions, also think carefully about where to place each of them on the number line. You will need to keep in mind that some fractions are missing.**

**Where would be a sensible place to start positioning the fractions?**

Check your answers on the **ANSWER SHEET**.

### Teaching

Watch the following White Rose video (Summer term, Week 1, Lesson 4 - Ordering Fractions) <https://whiterosemaths.com/homelearning/year-3/>. As always, make sure you have a pencil and some paper to work out some answers during the video. Pause the video at any point to give yourself time to calculate the correct answers.

### Activity 2

Complete **Ordering Fractions sheet**. Both the worksheet and the **ANSWER SHEET** are attached separately.

**Order fractions**

**1** a) Shade the bar models to represent the fractions.

b) What do you notice?

c) Complete the sentence.  
numerator denominator greater smaller

When fractions have the same \_\_\_\_\_, the \_\_\_\_\_ the fraction.

d) Write the fractions in order, starting with the smallest.

$\frac{1}{9}$	$\frac{8}{9}$	$\frac{4}{9}$	$\frac{3}{9}$	$\frac{7}{9}$
smallest				greatest

**2** a) Shade the bar models to represent the fractions.

b) What do you notice?

c) Complete the sentence.  
numerator denominator greater smaller

When fractions have the same \_\_\_\_\_, the \_\_\_\_\_ the fraction.

d) Write the fractions in order, starting with the greatest.

$\frac{1}{9}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{11}$
greatest				smallest

**3** Tommy and Dora are ordering fractions.

Tommy: I cannot order these fractions because the numerators and denominators are different.

Dora: I think I can use equivalent fractions to help me.

Who do you agree with? \_\_\_\_\_  
Talk about it with a partner.

**4** a) Complete the equivalent fractions.

$$\frac{2}{3} = \frac{8}{\square}$$

$$\frac{4}{5} = \frac{6}{\square}$$

$$\frac{3}{7} = \frac{6}{\square}$$

b) Write the fractions in order, starting with the greatest.

$\frac{6}{9}$	$\frac{2}{5}$	$\frac{1}{7}$	$\frac{2}{9}$
greatest			smallest

**5** Dexter and Alex are ordering fractions from smallest to greatest.

Dexter: I am going to make the numerators the same.

Alex: I am going to make the denominators the same.

Use Dexter's method to put the fractions in order.

Use Alex's method to put the fractions in order.

c) Which method do you prefer? Talk about it with a partner.

## EXTRA PROBLEM SOLVING CHALLENGES

**In the Money** (attached separately if you would like to print)

<https://nrich.maths.org/1099>

**Solutions** on website

**Fraction in a Box** (attached separately if you would like to print)

<https://nrich.maths.org/1103>

**Solutions** on website