



Year 3 Remote Learning MATHS Week 13

Overview of activities, learning and progression - Information for parents

This week we are starting a new unit on **fractions**. We have not covered any specific learning on fractions at school this year (it was planned in for this half term) but it obviously links to the unit that we did on division. The children also completed a unit on fractions in Year 1 and 2 so this will be building on that. Since it is a new unit it is worth noting the learning objectives from Year 1 up to now so you can see what they should have an understanding on. As always, please adapt the learning where necessary to suit your child's needs. You may find it useful to revisit some work from Year 2 if they seem to be struggling. Year 2 have included some remote learning on fractions so if necessary you could follow that before moving onto ours. (Year 2 remote learning, week 8 and 9)

- **Year 1** - Can recognise, find and name a half as one of two equal parts of an object, shape or quantity. Can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.
- **Year 2** - Can recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length or a shape, or of a set of objects or a quantity. Can write simple fractions e.g. $\frac{1}{2}$ of 6 = 3. Can recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.

End of year expectations for Year 3 in fractions:

- Can count up and down in tenths.
- Can recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10.
- Can recognise, find and write fractions of a discrete set of objects, both unit fractions ($\frac{1}{5}$) and non-unit fractions with small denominators ($\frac{2}{5}$).
- Can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
- Can recognise and show, using diagrams, equivalent fractions with small denominators.
- Can add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$).
- Can compare and order unit fractions.
- Can compare and order fractions with the same denominators.
- Can solve problems that involve all of the above.

If you would like to have a paper copy of any of the activities that we include this week please let us know, we

Useful website links to support the learning this week

To look at before or as part of this week's learning on fractions:

<https://www.bbc.co.uk/bitesize/topics/z3rbg82> - explaining what fractions are and how we write them. Revision from Year 1/2 learning.

<https://urbrainy.com/maths/year-2-age-6-7/fractions> - this website does have lots of activities and worksheets. However you do need to pay to access it all, but you can do a free trial and access some of these for free.

<https://www.twinkl.co.uk/resource/t-n-252538-year-2-maths-fractions-home-learning-activity-booklet>—a good revision booklet your child could work through. They could copy and do their own on paper, or you can print off if easier and you have that option. We are also happy to leave paper copies for you to collect from school, along with other resources you might need this week.

<http://resources.hwb.wales.gov.uk/VTC/ngfl/ngfl-flash/fractions/fractions.html> - little tutorial and then learning activity that the children can do on screen.

<https://www.topmarks.co.uk/maths-games/7-11-years/fractions-and-decimals> - lots of different online games. Please note these are for children between 7-11 so some will be too hard. Most of the games have levels you can



Online learning

We have created our own lessons around this unit of work this week. There are some videos made by us and we have used some clips from the white rose website.

The **Oak National academy** (that we have used for the last 2 weeks) also has a series of online lessons for the Year 3 objectives on fractions. If you prefer you could follow these lessons, or use as a follow up or practise. They cover the same objectives.

<https://classroom.thenational.academy/subjects-by-year/year-3/subjects/maths/>

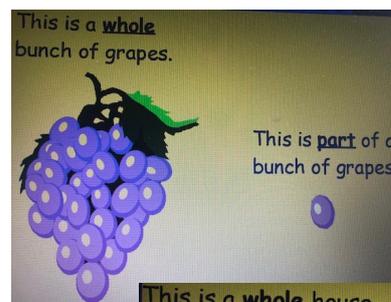
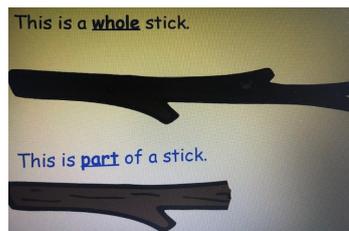
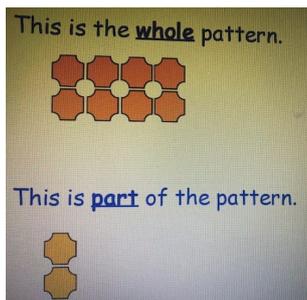
Teaching and activities

We have divided these up into 5 sessions or lessons if that's how you want to think of them. You might find your child can do one a day, but please don't worry if you need to break them down into smaller chunks. It will depend greatly on your child's focus, ability and interest!

1. Introduction to fractions unit: https://www.youtube.com/watch?v=j3iCSiVDT9A&list=PLfMIFHa5HhXUPLxbQCwFcs_OnpVketj-X&index=1

Starter: Mental maths tests. The number of stars shows the level of difficulty. (1 star = easiest, 5 stars = trickiest) You could do the one at your level as you would in school, or do a few and time yourself. The answers are included for you to mark your work after on the **answer sheet**.

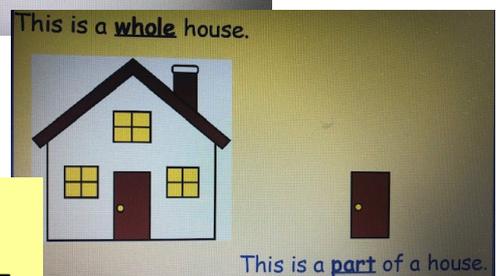
Teaching: Follow the whole lesson by Miss Thorn if you can: https://www.youtube.com/watch?v=RiVKtYyMIZk&list=PLfMIFHa5HhXUPLxbQCwFcs_OnpVketj-X&index=2



Here are the written details:

A fraction is

a part of a whole.



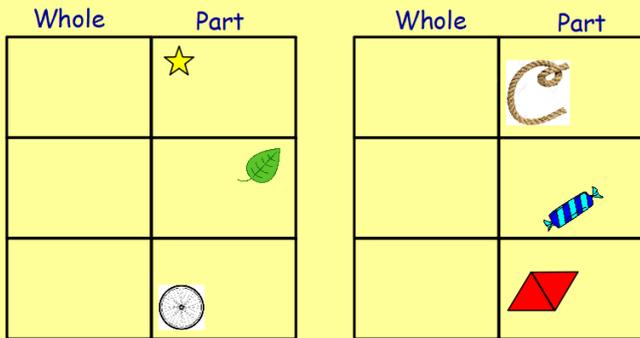
Can you show a part of these wholes?

Whole	Part	Whole	Part

Activity 1:

Draw your own version of this grid with the pictures and draw the parts.

Continued...



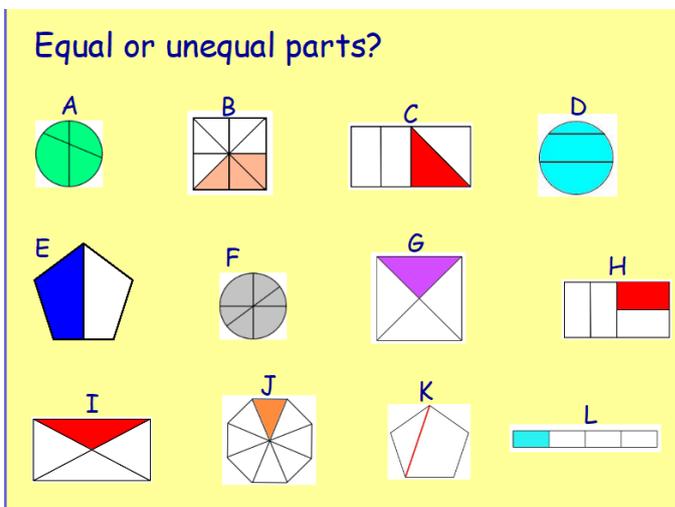
If this is the part, what is the whole?

Draw your own version of this grid with the pictures and draw the whole.

You could also find some more examples to add in.

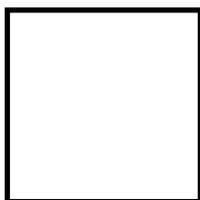
Teaching: Fractions are part of the whole. The parts must be equal.

Activity 2: Look at these pictures. Which show equal parts and which show unequal parts?



Teaching: The shapes might look different sometimes but they can still be equal. E.g. with shape H. The 4 parts are equal because the shape has been folded in half and then each half folded again, just in a different way. The parts are equal. You might want to make some of these shapes. This is the same for shape C. The rectangle was folded in half and then each half folded in half again, but in a different way. See if you can make these two by folding some paper like these.

Activity 3: How many ways can you divide this square into 4 equal parts? What about 3 equal parts? Look at the **answer sheet** to see some options. Remember the parts need to be equal in area, but not necessarily of shape.



Have a go with different shapes.

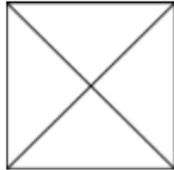
2. Introduction video:

https://www.youtube.com/watchv=LHV3GFY715Q&list=PLfMIFHa5HhXUPLxbQCwFcs_OnpVketj-X&index=3

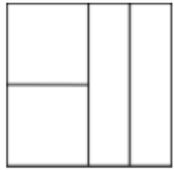
Starter: Equal and unequal parts. Let's recap our learning from yesterday:

Three children are splitting a square into equal parts.

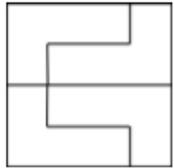
Teddy



Alex

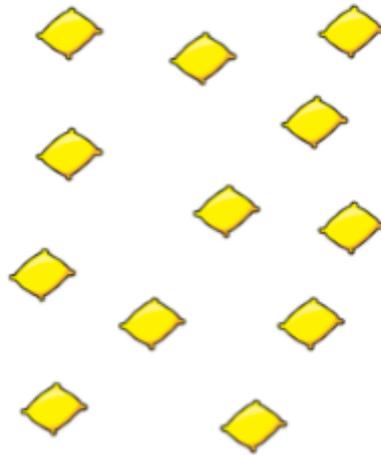


Mo



Who has split the square into equal parts? Explain why.

How many different ways can you put these beanbags into equal groups?

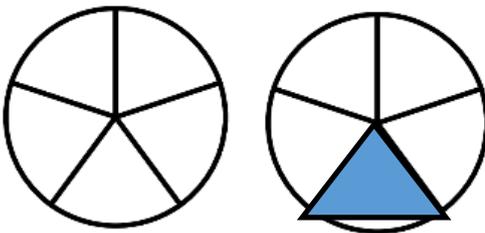


Check your answers on the **answer sheet**.

Main: Follow the online video lesson here from Miss Thorn: https://www.youtube.com/watch?v=i-svWQIOpnA&list=PLfMIFHa5HhXUPLxbQCwFcs_OnpVketj-X&index=4

or use this paper copy.

Teaching:



What is the whole? The whole is made up of 5 equal parts.

If I coloured one part what fraction would be coloured?

I have coloured in 1 part of the whole. I write this as $\frac{1}{5}$

We call the 5 the **denominator**. This tells us how many parts are in the whole.

5

The top number, the 1 is called the **numerator**. That tells us how many parts we are interested in.

How could I write the parts that are white as a fraction?

There are still 5 parts in total, now I am interested in the 4 white parts, so I write: $\frac{4}{5}$

5

Activity 1:

Sam has just eaten half of the cherries. How many were there in total?



Kate collected some leaves on her walk home. Here is a $\frac{1}{4}$ of what she found. How many did she find altogether?

4



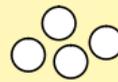
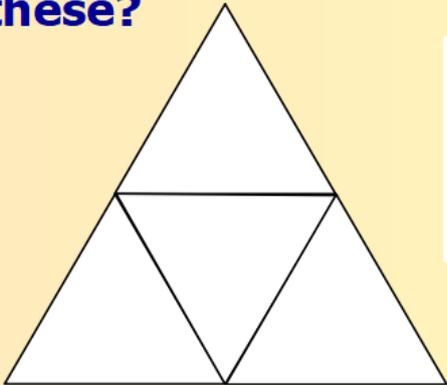
Tom showed his sister $\frac{1}{3}$ of his sticker collection. How many stickers does he have in total?



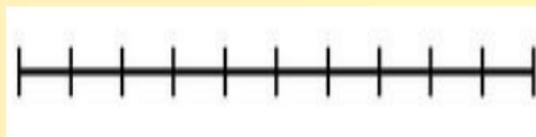
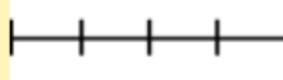
See the **answer sheet** to check you worked these out correctly.

Teaching:

How many parts make the whole in each of these?



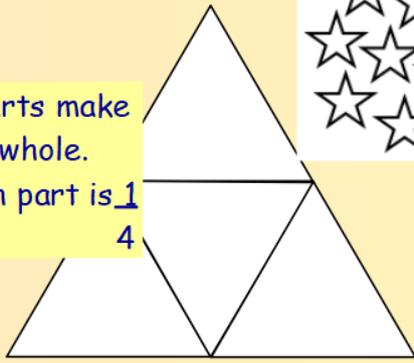
What is one part in each of these?



What's the same and what's different?

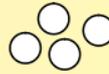
Continued...

4 parts make the whole.
Each part is $\frac{1}{4}$

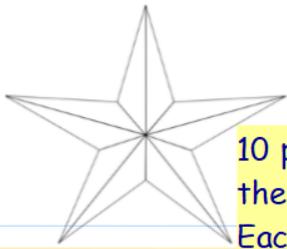
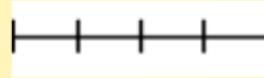


10 parts make the whole.
Each part is $\frac{1}{10}$

4 parts make the whole.
Each part is $\frac{1}{4}$



4 parts make the whole.
Each part is $\frac{1}{4}$



10 parts make the whole.
Each part is $\frac{1}{10}$



10 parts make the whole.
Each part is $\frac{1}{10}$

What's the same and what's different?



unit fraction

non-unit fraction

A **unit fraction** is one part of the whole. We need to know how many parts make up the whole.

A **non unit fraction** is where the numerator is greater than one.

Activity:

The **denominator** tells us how many parts make the whole.

The **numerator** tells us how many parts we are interested in.



$\frac{\quad}{\quad}$ of the shapes are circles.

$\frac{\quad}{\quad}$ of the shapes are triangles.

$\frac{\quad}{\quad}$ of the shapes are squares.

Fill in the missing fractions.

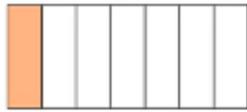
Here, even though there are shapes we are finding fractions of a number of items.

How many shapes are there altogether?

What fraction of the whole are the different shapes?

Teaching: **Activity 2:**

What fraction of the shape is shaded?



The whole has been divided into 7 equal parts.

1 equal part is shaded.

$\frac{1}{7}$ of the shape is shaded.

$\frac{1}{7}$ is a unit fraction.

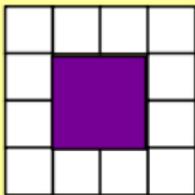
Now complete the **worksheets on unit and non unit fractions**. They are attached. If you have a printer you could print them out, but you could also just do on paper.

Remember you could collect a paper copy from school if you need. Just email your teacher to ask for this.

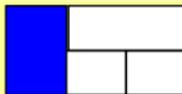
The **answers** are also saved for you to check your work.

3. Starter: What fraction is shaded of the whole?

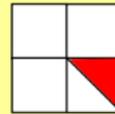
1.



2.



3.



If this is $\frac{1}{2}$,
what could the whole look like?

If this is $\frac{1}{3}$,
what could the whole look like?

If this is $\frac{1}{4}$,
what could the whole look like?

See the **answer sheet** to check you were right.

Main: Follow Miss Thorn's online lesson if you can: https://www.youtube.com/watch?v=WwHJqVrmKGQ&list=PLfMIFHa5HhXUPLxbQCwFcs_OnpVketj-X&index=5

If not follow below:

Teaching:

What fraction of Jamie's smarties are green?



Can you write any other fractions about this picture?

3 of the smarties are green.
There are 10 smarties in total.
3 are green.

10

2 are red. 1 is orange etc.

10

10

Activity 1: Use the sentence to help you. Say it for each picture. It's important to practise using the language.

What fraction of each set is yellow?
Explain your reasoning.

The whole is ___ and the part is ___

Teaching:

Draw a picture using coloured counters that shows this fraction.

$$\frac{5}{8}$$

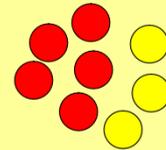
The whole is ___ and the part is ___

Is there another fraction you could write?



Draw a picture using coloured counters that shows this fraction.

$$\frac{5}{8}$$



Is there another fraction you could write?

$$\frac{3}{8}$$

Now try these:

What about this one?

$$\frac{3}{10}$$

The whole is ___ and the part is ___

Is there another fraction you could write?

What about this one?

$$\frac{1}{2}$$

The whole is ___ and the part is ___

Is there another way you could do it?

Teaching:

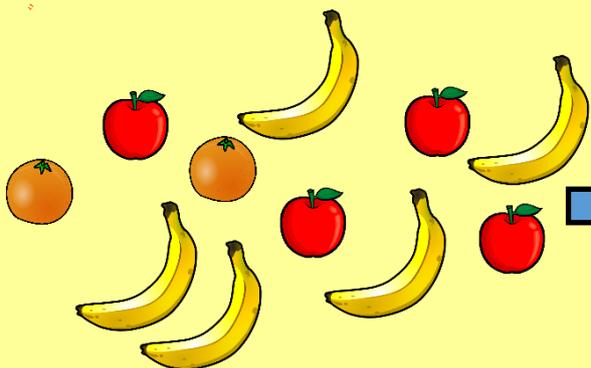
There are 11 pieces of fruit altogether. **11 is the whole.**

There are 5 bananas. They are $\frac{5}{11}$

of the whole.

Write the fraction for the apples and oranges.

What fractions can you write about this?



Activity: It would be best to do this with a grown up if possible.

Place 10 coloured counters (these could be coloured pieces of paper, lego pieces etc) in a bag - e.g. 3 blue, 3 yellow and 4 red.

Describe each colour as a fraction of the whole bag.

Remove one counter (do not replace). Now describe each counter as a fraction of the bag.

How have your fractions changed? Why?

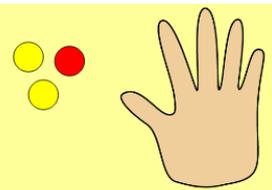
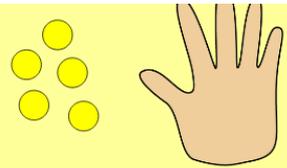
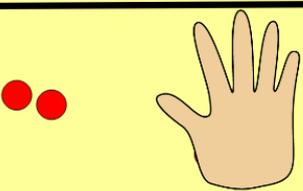
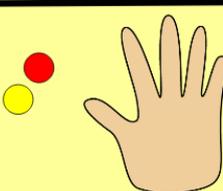
Keep removing one counter at a time and describe each colour as a fraction of the bag.

How are your fractions changing each time?

Repeat with a different number of counters in the bag.

Challenge: create a new bag of counters with $\frac{2}{12}$ yellow, $\frac{4}{12}$ blue and $\frac{1}{2}$ red and repeat activity.

Activity 2:

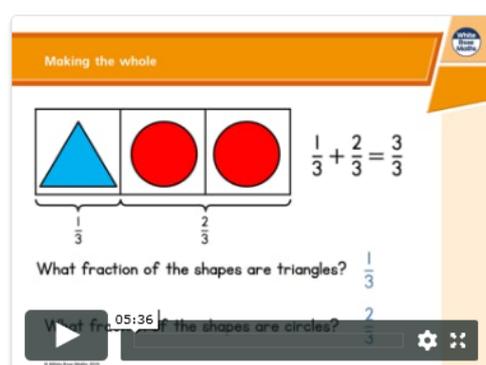
 <p>$\frac{3}{7}$ are yellow. What is hidden?</p>	 <p>$\frac{5}{9}$ are yellow. What is hidden?</p>
 <p>$\frac{1}{8}$ are yellow. What is hidden?</p>	 <p>$\frac{1}{2}$ are yellow. What is hidden?</p>

Check the **answer sheet** for these.

Teaching and Activity: Go to this website. There is a short video to watch and then an activity to complete. The worksheet and answers are attached. Please note, when you click on this link it will take you to the most recent fraction lessons available, you will need to click on the minus sign by that lesson and scroll down to **Week 1, lesson 2**.

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

Lesson 2 - Making the whole



 **Get the Activity**

Y3 Spring Block 5 WO2 Making the whole 2019

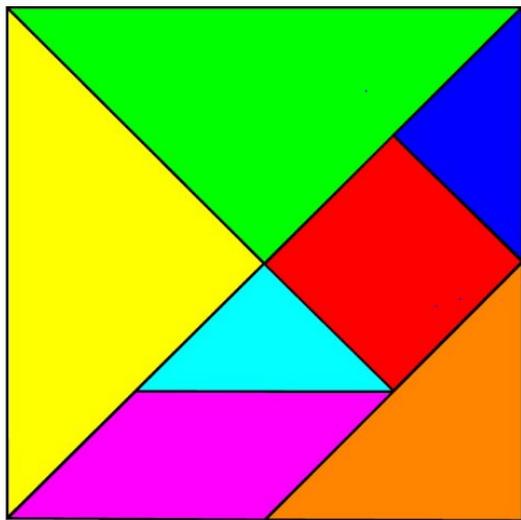
 **Get the Answers**

Y3 Spring Block 5 ANS2 Making the whole 2019

Challenge! - Deeper thinking challenge, tricky but have a go if you fancy!

It will probably help you if you can cut these shapes out.

What is the fraction of each shape?



See the **answer sheet** to see how you got on.

You might need a grown up to look at this with you, and check your understanding.

The focus is on you explaining your thinking.

Starter: Get a piece of paper and pencil or pen. Watch Miss Thorn's activity. She will give you a starting number. She will then give you operations to follow which you need to do in order. You only need to write the number that you end up on, but you can write down notes as you go. Don't if you don't need to though.

https://www.youtube.com/watch?v=cM4z4ygBiq0&list=PLfMIFHa5HhXUPLxbQCwFcs_OnpVketj-X&index=6

Here is the written copy if you would prefer:

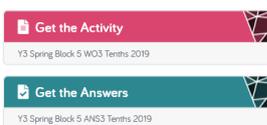
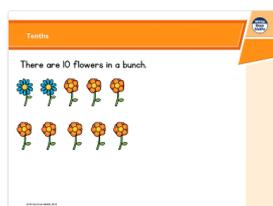
- 1) Start with 8. Double it. Add 4. Double it. Divide by 5. Half it. _____
- 2) Start with 100. Half it. Divide by 10. Double it. Times by 3. Divide by 5. _____
- 3) Start with 5. Multiply it by 4. Multiply that number by 2. Divide that number by 8. _____
- 4) Start with 100. Find a quarter of it. Take away 1. Divide by 4. Multiply by 2 _____

Main:

Teaching: Watch the mini lesson on White Rose all about tenths:

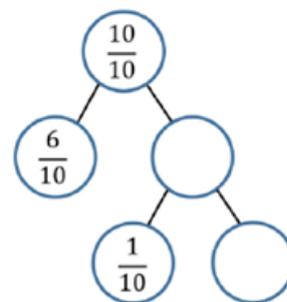
<https://whiterosemaths.com/homelearning/year-3/> Like last lesson, you'll need to click on the minus sign by the lesson that initially comes up and then scroll down to find **week 1, lesson 3**.

Lesson 3 - Tenths



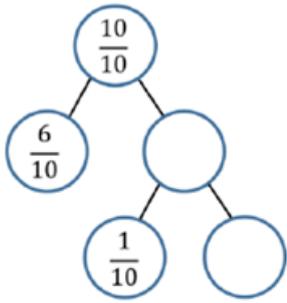
Activity 1: Complete the worksheet after this lesson.

You can then check your answers on the **answer sheet**.



Teaching: Using your knowledge of tenths, how could you complete this part part/whole model?

Continued...



We know the whole is $10/10$. This is the same as 1. 1 whole.

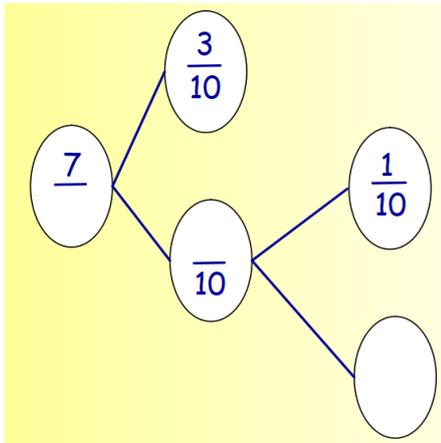
What goes with $6/10$'s to make $10/10$? = $4/10$.

That $4/10$ has then been broken down into 2 parts. One is given to us, $1/10$. The remaining part as to add together with $1/10$ to make $4/10$. It is $3/10$'s.

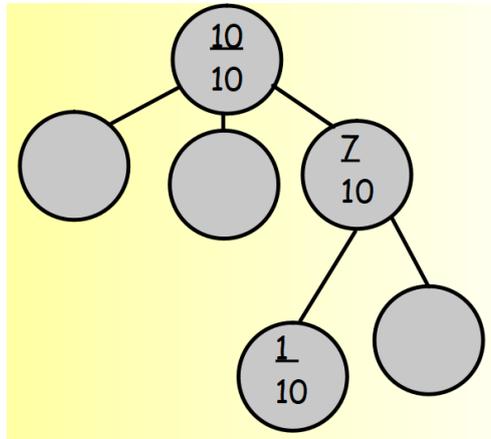
Activity 2:

Try these on your own. Copy the models onto paper and add in the missing parts.

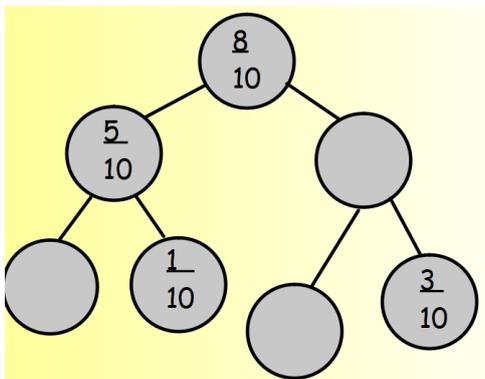
1.



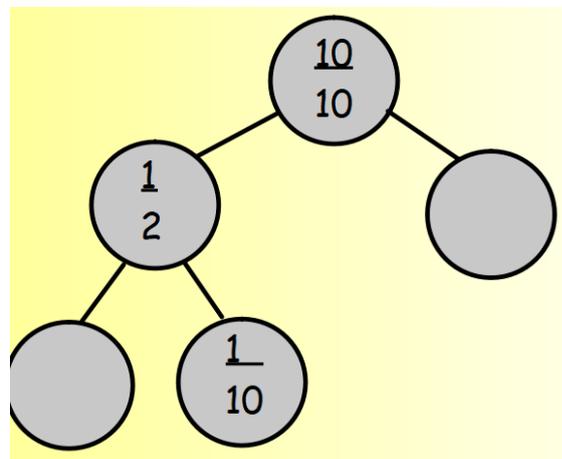
2.



3.



4.



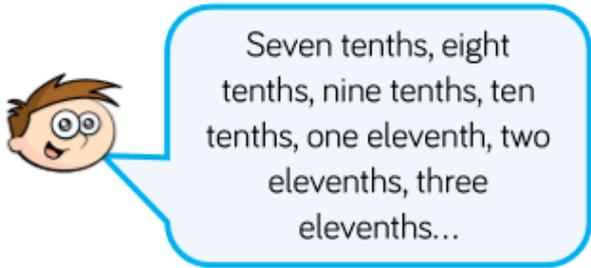
Look on the **answer sheet** to see how you get on.

Extra challenge: Create some of your own part whole models to show fractions.

5.

Starter: Look at these two problems. You must explain your reasoning. This could be write down, or you could talk it through with someone. Give examples to prove your point if you can.

Teddy is counting in tenths.



Can you spot his mistake?

True or False?

Five tenths is $\frac{2}{10}$ smaller than 7 tenths.

Five tenths is $\frac{2}{10}$ larger than three tenths.

Do you agree?

Explain why.

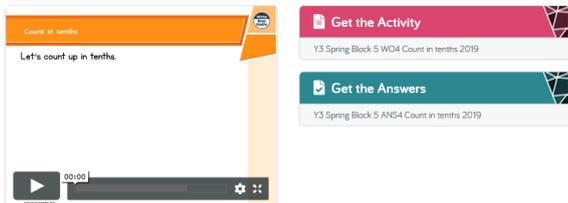
Check your answers after on the **answer sheet**.

Main:

Teaching: Counting in tenths.

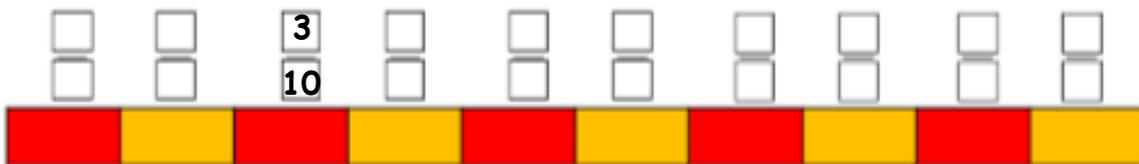
Watch the video all about counting in tenths. Remember when you click on the link this won't be the lesson that comes up, you will need to click the minus sign next to that lesson and scroll down to week 1, lesson 4: <https://whiterosemaths.com/homelearning/year-3/>

Lesson 4 - Count in tenths



Activity 1: Complete the activity pack for this session and then check your answers on the **answer sheet**.

Activity 2: Add in the fractions on this number line, I've done the first one for you.



Representation	Words	Fraction
	One tenth	$\frac{1}{10}$

Practise counting forwards and backwards using the counting stick.

Draw your own version of this table all the way up to 1 whole. Add in the pictures, words and

- What comes between $\frac{4}{10}$ and $\frac{6}{10}$ fractions.
- What is one more than $\frac{10}{10}$?
- If I start at $\frac{8}{10}$ and count back $\frac{4}{10}$, where will I stop?