Maths- 11.5.20

Here are your maths tasks for this week- please use the book provided to complete the tasks ☺ We normally do maths Monday-Thursday, with Friday being our day for Mathletics and Times table rockstars to consolidate other areas of learning. Please see the Times table sheet for suggested activities. I've attached an arithmetic paper for Friday to complete this week too ☺

Monday

This week, we will be looking at fractions, decimals and equivalent fractions. Today, we will focus on equivalent fractions. Equivalent fractions are fractions which have the same amounts or parts. If we were to show them in a diagram or a drawing, the same amount would be shaded. When we are finding equivalent fractions, what we do to the top number (the numerator), we must do to the bottom number (denominator). So for example, if we wanted to find out these equivalent fractions:

So 2 x 2 = 4. Which means that 2/10 is the same as 4/20.

$$\frac{2}{10} = \frac{4}{20}$$

To get from 10 to 20, we know that we have to x the 10 by 2 (because 2 x 10 = 20). So, because we have 'x' the denominator by 2, we need to 'x' the numerator by 2 to find the equivalent fraction.

You can also simply fractions so imagine you had 4/20 to start off with and you needed to find how many /10 would be an equivalent fraction, you would need to find a times table they would both be a part of, in this case it is the 2 x tables, so we would divide the top and bottom number by 2.

So 4 divided by 2 is 2.

$$\frac{2}{10} = \frac{4}{20}$$

20 divided by 2 is 10. So 4/20 is the same as 2/10.

Task:

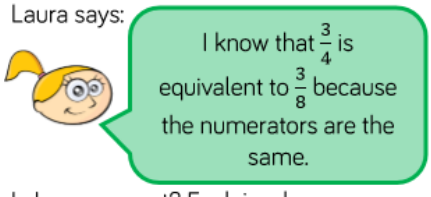
See if you can find the equivalent fractions to these questions below:

c $\frac{1}{6} = \frac{3}{}$ **d** $\frac{1}{4} = \frac{}{40}$ **e** $\frac{2}{7} = \frac{20}{}$ **f** $\frac{2}{5} = \frac{}{20}$

g $\frac{2}{3} = \frac{}{9}$ **h** $\frac{1}{2} = \frac{}{16}$ **i** $\frac{1}{4} = \frac{2}{}$ **j** $\frac{2}{3} = \frac{}{12}$

Challenge:

Laura says:



Is Laura correct? Explain why.

Tuesday

Today, we will be looking at finding fractions of amounts using word problems. When we are finding fractions of amounts, we need to use the short division method from last week to help us. We look at the denominator (bottom number) to see what we are dividing the whole number. Once we have the answer, we look at the numerator (top number) to see what we need to 'x' the number by to get the answer.

For example:

The bottom number tells us what to divide by and the top number shows us what to 'x' the answer by.

¾ of £36 =

$$\begin{array}{r} 0\ 9 \\ 4\ \overline{)\ 3\ {}^{3}6} \end{array}$$

9 X 3 = 27

Remember, when we are solving problems we must read the problem first. Then, we must think about reading the question. Then, we underline the important information. Then, we work out the problem using the method above and make sure we remember to 'x' by the top number.

Task:

Try to work out these problems below using the method we have just learnt above.

A chef ordered twenty-four eggs for her restaurant. $\frac{1}{12}$ of the eggs were used for a chocolate brownie special and $\frac{1}{4}$ of the eggs were used for cooked breakfasts. From the remainder, $\frac{1}{2}$ of the eggs were used for the meringue in an Eton Mess pudding.

a. How many eggs were used for the chocolate brownie?
b. How many eggs were used for the breakfasts?
c. How many eggs were used for the Eton Mess?
d. How many eggs were left?

At the county running championships, a school won 12 medals. $\frac{1}{2}$ of the medals were gold, $\frac{1}{3}$ of the medals were silver and $\frac{1}{6}$ of the medals were bronze.

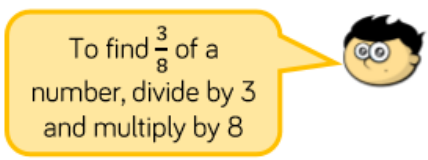
a. How many medals were gold?
b. How many medals were silver?
c. How many medals were bronze?

At the local triathlon, which includes cycling, running and swimming, competitors travel a total distance of 15km. $\frac{2}{3}$ of the distance is cycling.

a. How far do the competitors cycle?
b. What distance is left for running and swimming?

Challenge:

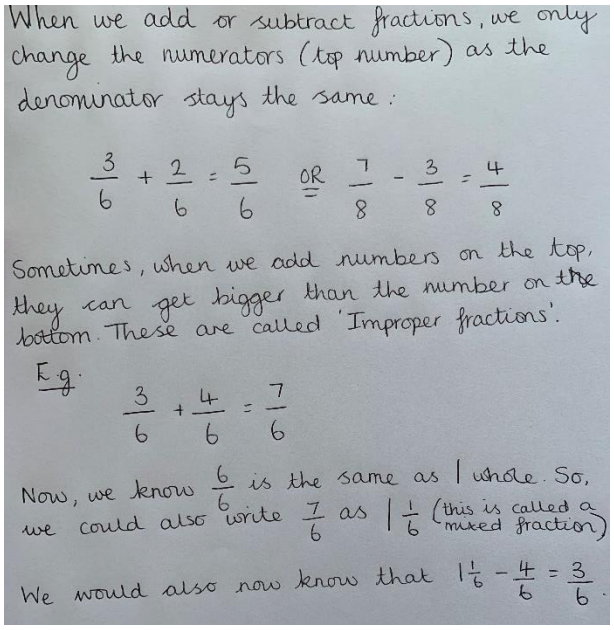
True or False?



Convince me

Wednesday

Today, we will be focusing on adding and subtracting fractions with the same denominator. We must remember that when we are adding and subtracting fractions with the same denominator, we always leave the bottom number the same. We don't need to do anything to it. See below for an explanation on improper fractions:



There are some PowerPoints and further resources here to help out with this lesson:

https://garyhall.org.uk/maths-objectives/124/add-and-subtract-fractions-with-the-same-denominator

I would also suggest if there is anyone struggling- draw a strip and make it into the denominator number as below. Then colour in the top numbers so then you can count them altogether to get the answer.

E.G. 3/7 + 2/7 =

Task:

1. How many different ways can you complete the calculations?

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

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

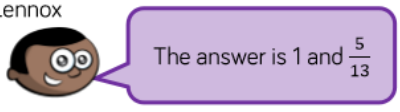
2. 6/7 + 4/7 =
3. 5/6 – 4/6 =
4. 13/20 + 11/20 =
5. 16/20 – 9/20 =
6. 7/12 + 2/12 =

Challenge:

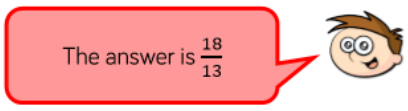
Lennox and Brandon are solving:

$$\frac{6}{13} + \frac{5}{13} + \frac{7}{13}$$

Lennox



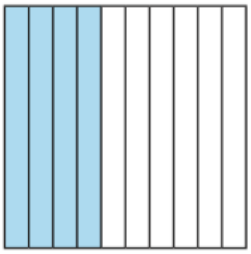
Brandon



Who do you agree with? Explain why.

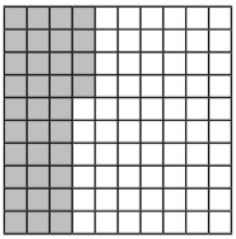
Thursday

Today, we will be focusing on finding decimal equivalents to tenths and hundredths. A tenth as a number is smaller than the number '1'. It is as if 10/10 is the one whole and 1/10 is only one small part of that whole number. So for example:



This diagram here shows me that there are 10 pieces altogether. So one whole = 10. Now each part is the same as 1/10 as it is 1 out of 10 pieces that are there. If we think of '1' as the whole, then 1 part would be 0.1 as it is a tenth of the whole. As there is one '0' for 10, there needs to be one number after the decimal.
This diagram now shows:
Fraction- 4/10
Decimal- 0.4

This is the same for Hundredths. The whole thing is made of 100 little squares, so now each one is 0.01 as 100 has two 0's, there needs to be 2 numbers after the decimal.



This diagram now shows that there are 34/100 that are shaded in. I would write this as a decimal as 0.34.

Task:

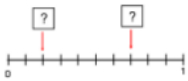
See if you can complete these questions below:

Tenths

Complete the table.

Image	Words	Fraction	Decimal
			
	Five tenths		
			0.9

Write the numbers shown as fractions and decimals.



Draw or make representations of:

0.4 0.8 0.1

What's the same about all the decimals?

What's different?

Challenge:

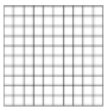
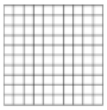
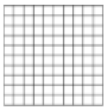
Tamina says,

17 hundredths is the same as 1,700

Is she correct?
Explain your answer.

Hundredths

Complete the table.

Image	Words	Fraction	Decimal
	56 hundredths		
		$\frac{17}{100}$	
			0.32

Write the number as a fraction and as a decimal.

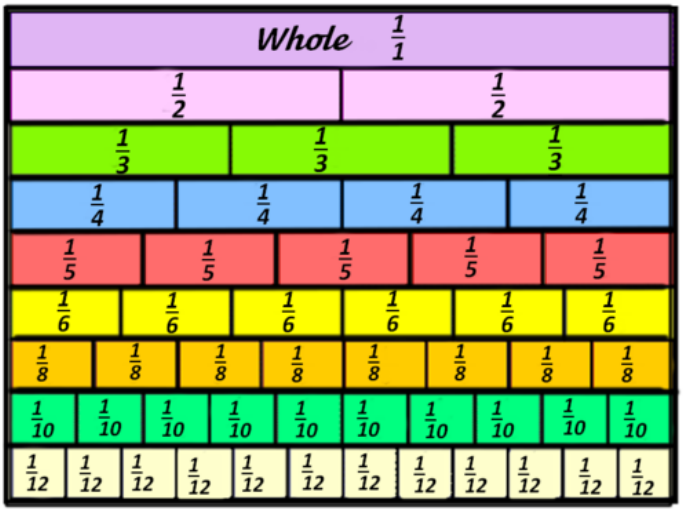
Friday

TT rockstars/Mathletics/Arithmetic test ☺

Help for this week

Equivalent fractions

If your child is struggling with this concept, it might be best to do some work around a fraction wall first so that they understand what equivalent fractions might look like. Encourage your child to use a ruler to see which fractions are the same as ½ - they might be able to point out that 2 quarters are the same or 3/6 are the same. Then you could discuss- how could we have got from ½ to 3/6? What times tables are 2 and 6 in? This will help them build up the understanding in a visual way.

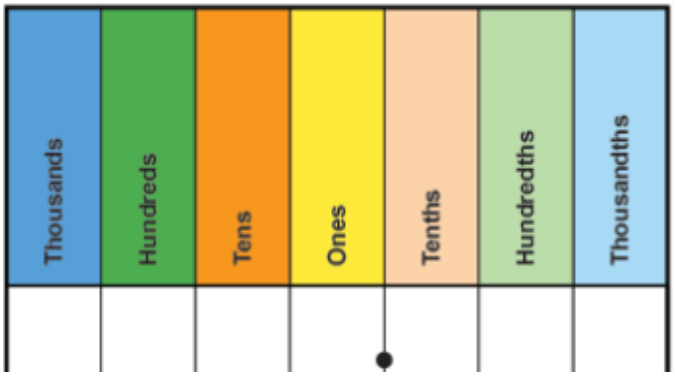


Here are two other visual methods which could help with this concept first:

- Use two strips of equal sized paper. Fold one strip into quarters and the other into eighths. Place the quarters on top of the eighths and lift up one quarter, how many eighths can you see? How many eighths are equivalent to one quarter? Which other equivalent fractions can you find?
- Using squared paper, investigate equivalent fractions using equal parts. e.g. 2 4 = 8 . Start by drawing a bar 8 boxes along. Underneath compare the same length bar split into four equal parts.

Decimals

Another way that I help children to see the changes in numbers when they divide or multiply by 10/100 is by using a place value chart:



All numbers have decimal Dave after them, we just don't draw it with whole numbers. When we have decimal numbers, they are smaller than normal numbers, so we call them tenths. Hundredths are even smaller than tenths. Say we had 54. The 50 is a tens number and the 4 is ones (so we would put those numbers under the right column). If we divide a number, we make it smaller, so if we divide by 10, we move both numbers one place to their right. If we divide by 100, we move both numbers 2 spaces to the right. It's important that the children understand that because 100 has 2 '0's, this means there should be 2 numbers AFTER the decimal. If the number is divided by 10, because there is only one '0', there

should only be one number AFTER the decimal. We always have to have a number in the ones, even if this is a '0' as a place holder.

If you need any extra support, please email me on michaelsyddallyear4@gmail.com and I will help ☺