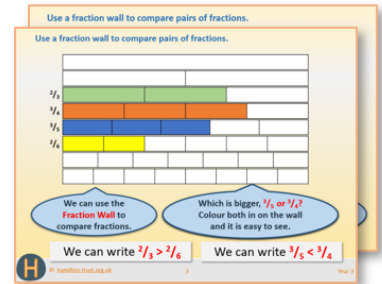


Week 8, Day 2

Equivalence between percentages and fractions.

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.

Practice Sheet (Hot)

Practice Sheet (Mild)

Place value addition and subtraction

1. 4.538 + 0.2	2. 4.538 + 0.03
3. 4.538 - 0.004	4. 4.538 - 0.02
5. 6.231 + 0.11	6. 6.231 + 0.101
7. 6.231 + 0.011	8. 5.846 - 0.211
9. 5.846 - 0.13	10. 5.846 - 0.013
11. 5.846 - 0.204	12. 4.789 - 0.001

Challenge

Start at 4.562.
Add tenths and hundredths to make an addition chain ending with the number 4.627.
Start at 10.769.
Subtract tenths, hundredths and thousandths to make a subtraction chain ending with the number 9.762.

3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**

Deduce the decimal

Deduce the decimal (Hot)

Work in pairs

Things you will need:

- Two different coloured pencils
- A place value chart
- A pencil

What to do:

- Without showing your partner, write down a number with three decimal places like 4.538.
- The second person to write down a number on the place value chart which adds to make the number.
- Show your partner the chart.
- Your partner adds on the shaded numbers and writes the completed number.
- Now swap the two charts, match your number!
- Repeat and repeat!
- Now a different person to write down a number on the place value chart. Repeat the process.

Learning intention:

Children will be able to deduce a number with three decimal places.

Learning objective:

Children will be able to deduce a number with three decimal places.

4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation**...

Learning Reminders

Equivalence between percentages and fractions.

It is helpful to **remember** common **equivalent fractions** and **percentages**.

$$\frac{1}{10} \equiv 10\%$$

$$\frac{1}{5} \equiv 20\%$$

$$\frac{1}{4} \equiv 25\%$$

$$\frac{1}{2} \equiv 50\%$$

If we remember that $\frac{1}{10} \equiv 10\%$, we can find other tenths by multiplying the percentage.

E.g. $\frac{3}{10} \equiv 30\%$ and $\frac{7}{10} \equiv 70\%$.

If $\frac{1}{4} \equiv 25\%$, $\frac{3}{4} \equiv 75\%$, since $3 \times 25 = 75$.

Learning Reminders

Equivalence between percentages and fractions.

A class of children are asked to choose between swimming, cycling and football. $\frac{1}{4}$ chose swimming. $\frac{3}{10}$ of them prefer cycling. What percentage chose football?

Put the information we have into a bar model and fill in the equivalent percentages for swimming and cycling

$$\frac{1}{4} \equiv 25\%$$

$$\frac{3}{10} \equiv 30\%$$

Class of children		
$\frac{1}{4}$ 25% Swimming	$\frac{3}{10}$ 30% Cycling	? Football

The percentages MUST add to 100% so that everyone in the class is included.

$$25\% + 30\% + ? = 100\%$$

So 45% chose football.

Practice Sheet Mild

Equivalent percentages

Complete the missing percentages.

Children were asked to vote for cycling, swimming or football as their favourite weekend activity	
Fraction	Percentage
$\frac{1}{2}$ children prefer swimming	
$\frac{1}{4}$ prefer cycling	
The rest prefer football	

Children were asked to vote for dogs, cats or rabbits as their ideal pet	
Fraction	Percentage
$\frac{1}{2}$ prefer dogs	
$\frac{3}{10}$ prefer cats	
The rest prefer rabbits	

Children were asked to vote for oranges, bananas or apples as their favourite fruit	
Fraction	Percentage
$\frac{4}{10}$ prefer bananas	
$\frac{3}{10}$ prefer apples	
The rest prefer oranges	

Practice Sheet Hot

Equivalent percentages

Complete the missing percentages.

Children were asked to vote for dogs, cats or rabbits as their ideal pet

Fraction	Percentage
$\frac{1}{2}$ prefer dogs	
$\frac{1}{5}$ prefer cats	
The rest prefer rabbits	

Challenge

In another pet survey, fish were voted for by $\frac{1}{20}$ of children, while snakes got $\frac{1}{25}$ of the vote!
What percentages are these fractions?

Children were asked to vote for cycling, swimming or football as their favourite weekend activity

Fraction	Percentage
$\frac{1}{2}$ of children prefer swimming	
$\frac{3}{10}$ of children prefer cycling	
The rest prefer football	

Children were asked to vote for oranges, bananas or apples as their favourite fruit

Fraction	Percentage
$\frac{2}{5}$ of children prefer bananas	
$\frac{3}{10}$ of children prefer apples	
The rest prefer oranges	