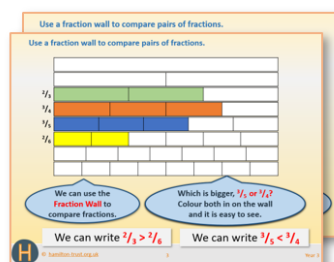


# Week 8, Day 1

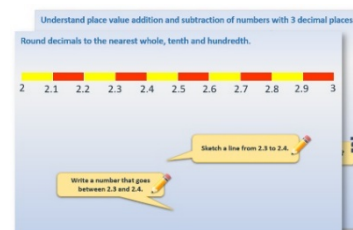
## Introduction to percentages

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

1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



OR start by carefully reading through the **Learning Reminders**.



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

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 10.749. Subtract tenths, hundredths and thousandths to make a subtraction chain ending with the number 9.782.

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

**Deduce the decimal**

What you will need:

- 100 decimal counter cards
- 1 place value chart
- 1 pencil

What to do:

- Shower: Arrange your partner, write down a number with three decimal places like the CECCE.
- Use a coloured pencil to shade numbers on the place value chart which add to make that number.
- Show your partner the chart.
- Your partner looks at the shaded numbers and writes the completed number.
- Show what they have written, match your number!
- Swap roles and repeat.
- Use a different coloured pencil to shade numbers on the place value grid. Numbers already shaded cannot be re-used.

Learning outcomes:

- Understand and explain a number with three decimal places.
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Investigation: Use the place value chart to make numbers with three decimal places which are 10 or 100 times bigger.

Investigation: Use the place value chart to make numbers with three decimal places which are 10 or 100 times bigger.

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

## Learning Reminders

### Introduction to percentages.

%

Where have you seen this symbol?

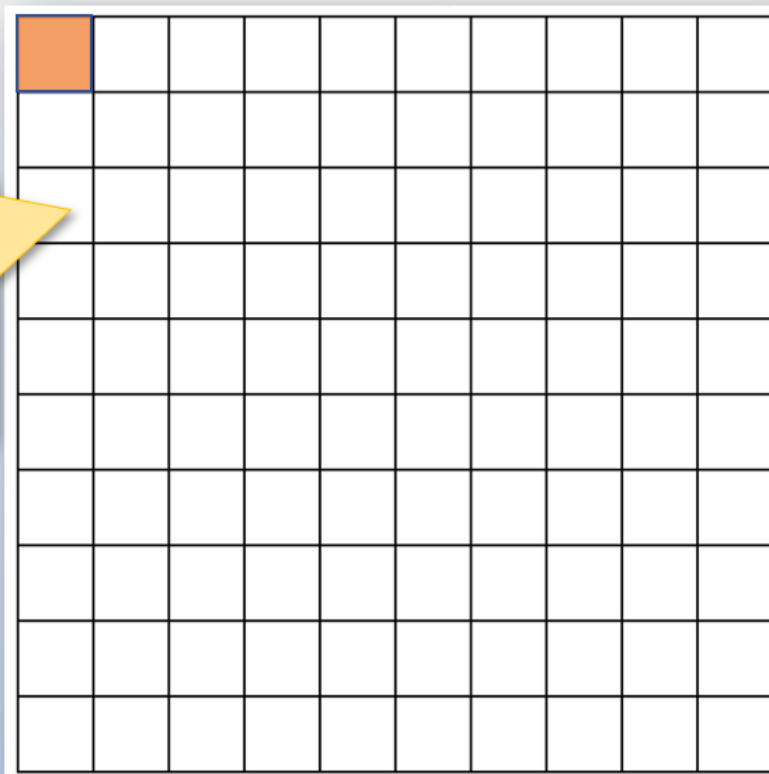
What does it stand for?



*Per cent means per 100,  
or out of 100.*

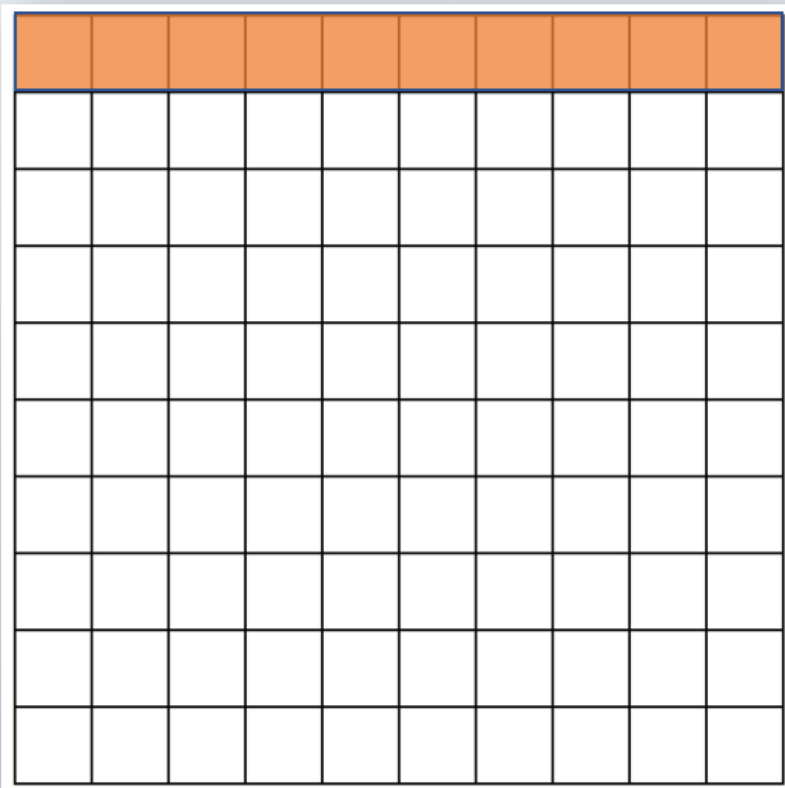
Each small square is  
one hundredth of  
the whole square.  
1 out of a 100 is the  
same as 1 percent.  
We write this as 1%.

$$\frac{1}{100} = 1\%$$



## Learning Reminders

### Introduction to percentages.



10 small squares are shaded this time. That is equivalent to 10% of the whole square.

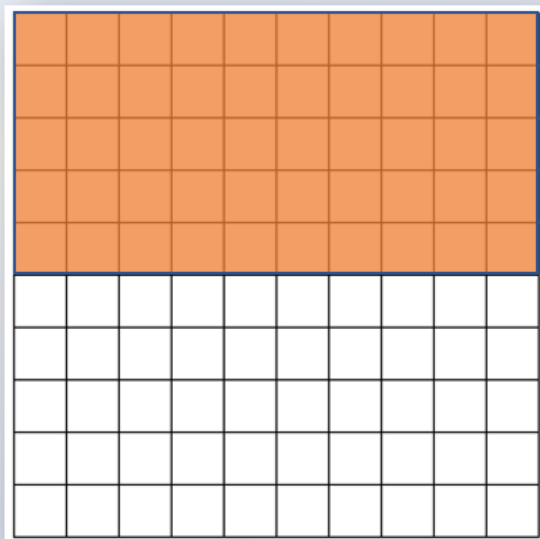
The symbol ' $\equiv$ ' means 'equivalent to'.

$$10/100 \equiv 1/10 \equiv 10\% \equiv 0.1$$

That's a lot of different ways to write the same amount!

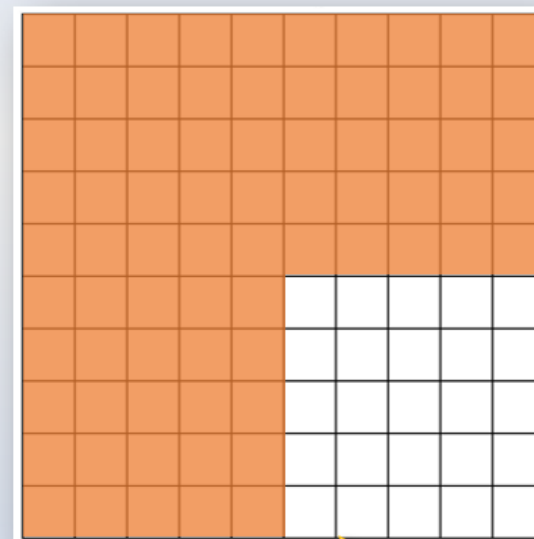
## Learning Reminders

### Introduction to percentages.



**50 small squares are shaded.  
That is equivalent to 50% of  
the whole square.**

$$50\% \equiv \frac{50}{100} \equiv \frac{5}{10} \equiv \frac{1}{2} \equiv 0.5$$



**75 small squares are shaded.  
That is equivalent to 75% of  
the whole square.**

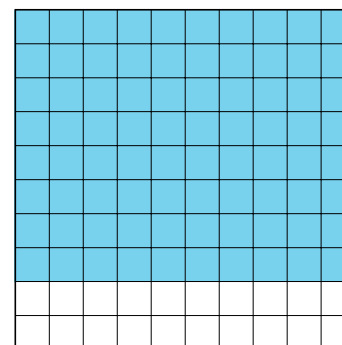
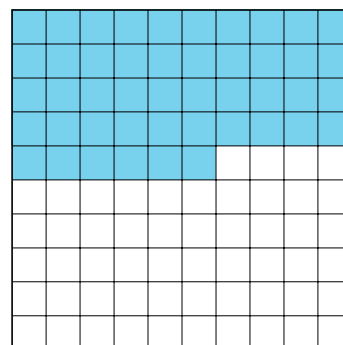
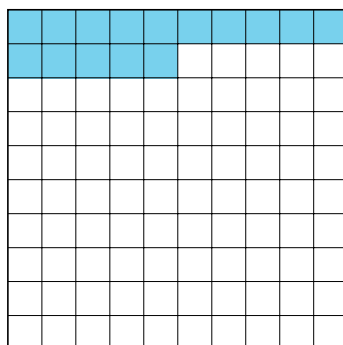
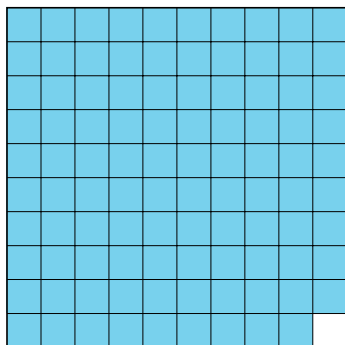
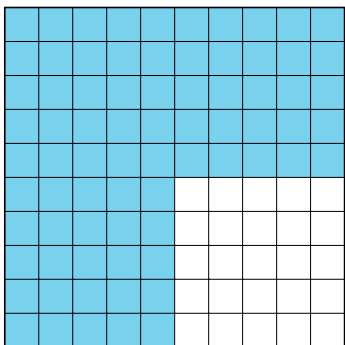
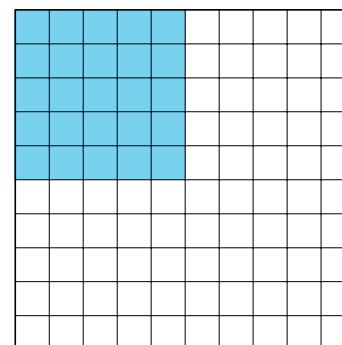
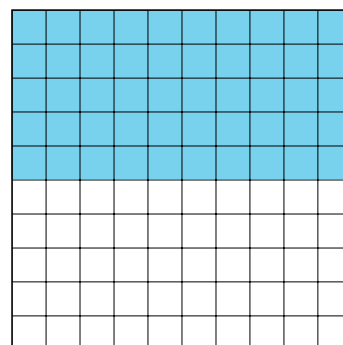
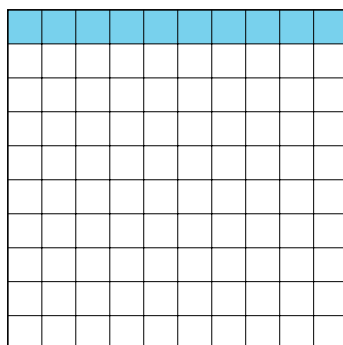
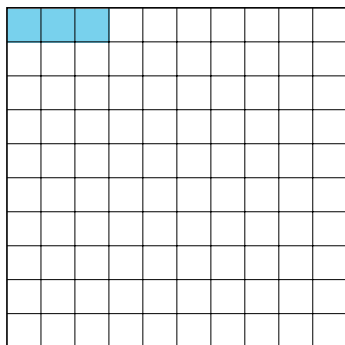
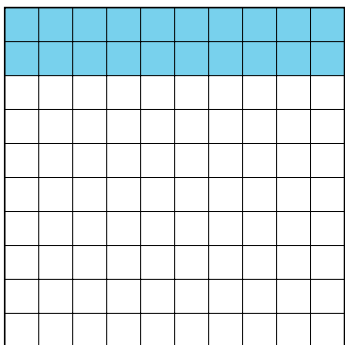
$$75\% \equiv \frac{75}{100} \equiv \frac{3}{4} \equiv 0.75$$

## Practice Sheet Mild

### Percentages

Write the percentage of each square that is shaded.

e.g. 20%



## Practice Sheet Hot Percentages

Write the percentage of each square that is shaded, and an equivalent fraction and decimal,

e.g.  $20\% = 0.2 = \frac{1}{5}$

