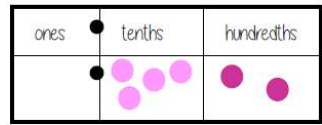
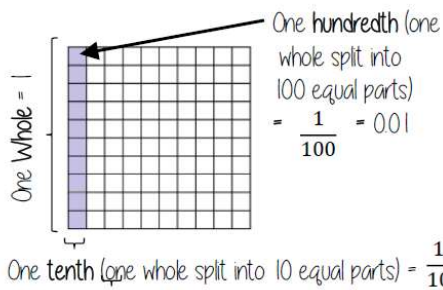


# Knowledge Organiser: Year 8 Maths; Percentages (Part 1)



## Tenths and hundredths

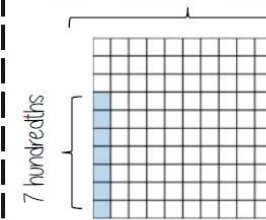


0 ones, 5 tenths and 2 hundredths

$$0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01 = 0 + 0.5 + 0.02 = 0.52$$

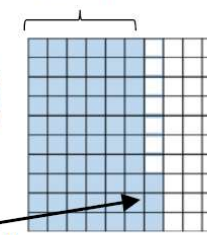
## Percentages on a hundred grid

100% = a whole = 100 hundredths



7 hundredths  
7 out of 100  
7%

6 tenths

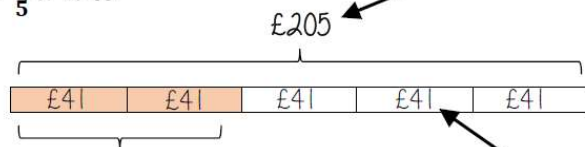


6 tenths and 3 hundredths  
63 hundredths  
63%

## Fraction of a given amount

Find  $\frac{2}{5}$  of £205

The bar represents the whole amount

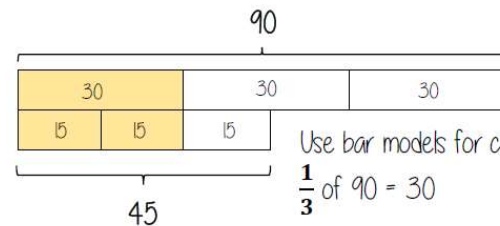


2 out of the 5 equal parts

$$2 \times £41 = £82$$

$$£205 \div 5 = £41$$

Each part of the bar model represents £41



Use bar models for comparisons

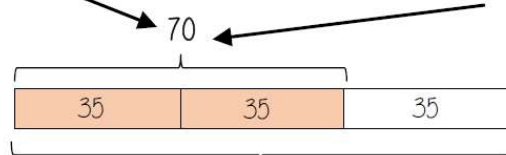
$$\frac{1}{3} \text{ of } 90 = 30$$

$$\frac{2}{3} \text{ of } 45 = 30$$

$$\therefore \frac{1}{3} \text{ of } 90 = \frac{2}{3} \text{ of } 45$$

## Use a fraction of amount

$\frac{2}{3}$  of a value is 70. What is the whole number?



$$35 \times 3 = 105$$

The whole number is 105

$$70 \div 2 = 35$$

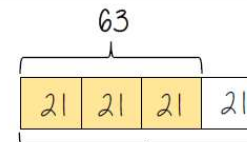
Each part of the bar model represents 35

The wording of the question is important to setting up the bar model

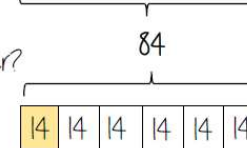
$\frac{3}{4}$  of a number is 63.

What is  $\frac{1}{6}$  of the number?

$$= 14$$



Find the whole



Use the whole to find a given part

## Keywords

Fraction: how many parts of a whole we have

Equivalent: of equal value

Whole: a number with no fractional or decimal part

Percentage: parts per 100 (uses the % symbol)

Place Value: the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right

Convert: change into an equivalent representation, often fraction to decimal to a percentage cycle.



# How do we use Knowledge Organisers in Mathematics?

## How can you use knowledge organisers at home to help us?

- **Retrieval Practice:** Read over a section of the knowledge organiser, cover it up and then write down everything you can remember. Repeat until you remember everything.
- **Flash Cards:** Using the Knowledge Organisers to help on one side of a piece of paper write a question, on the other side write an answer. Ask someone to test you by asking a question and seeing if you know the answer.
- **Mind Maps:** Turn the information from the knowledge organiser into a mind map. Then reread the mind map and on a piece of paper half the size try and recreate the key phrases of the mind map from memory.
- **Sketch it:** Draw an image to represent each fact; this can be done in isolation or as part of the mind map/flash card.
- **Teach it:** Teach someone the information on your knowledge organiser, let them ask you questions and see if you know the answers.

## How will we use knowledge organisers in Mathematics?

Knowledge organisers will be used before I complete a Learning Check or Common Assessment. I will spend part of the lesson looking over each of the key topics of the half term before completing the Learning Check or Common Assessment.

I will also use these at home to complete my own independent learning and revision of these key topics.

GLUE HERE