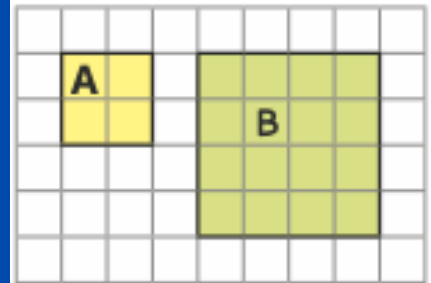




MATHS- RATIO

YEAR 5



RECAP

- Recall multiplication facts for multiplication tables up to 12×12
- Recall division facts for multiplication tables up to 12×12
- Find fractions of an amount
- Find multiples of a given number

CRUCIAL KNOWLEDGE

- This is a year 6 unit. For y5, you will be starting to explore the following concepts practically:
- The $:$ symbol shows the relation between the two quantities represented. Enlargement means to change the size of a shape.
- A scale factor is the number that will determine by how much a shape is going to change sizes.
- In order to make a shape bigger, we need to use a scale factor greater than 1.
- In order to make a shape smaller, we need to use a scale factor between 0 and 1.

Ratio Symbol

The ratio of footballs to rugby balls is 1:4.
The ratio of rugby balls to footballs is 4:1.

The ratio of apples to bananas 1:2.
The ratio of bananas to oranges is 2:3.
The ratio of apples to bananas to oranges is 1:2:3.

Ratios and fractions

For every 3 green counters there are 2 yellow counters

The ratio of green to yellow counters is $3 : 2$

The fraction of green counters is $\frac{3}{5}$ (There are 3 green counters, 2 yellow counters, 5 counters overall)

The fraction of yellow counters is $\frac{2}{5}$

The ratio symbol

"For every 2 strawberries I have 4 bananas and 6 berries"

Ratio of strawberries, bananas and berries $2 : 4 : 6$

The order of notation follows the order of the parts

The colon notation is the symbol for ratio "For every..."

Scale Factors

The two rectangles are similar.

Use corresponding sides to calculate a scale factor

This is an enlargement of scale factor 1.5

Scale factor can also be calculated by:

Bigger corresponding side / Smaller corresponding side

Small corresponding side x SF = Big corresponding side

Big corresponding side ÷ SF = Small corresponding side

Representing a ratio

"For every 5 boys there are 3 girls"

5:3

This is the "whole" — boys and girls together

This represents the 5 boys

This represents the 3 girls

KEY VOCABULARY

Ratio	Ratio is a relationship between two things when it is expressed in numbers or amounts.
Proportion	A part to whole comparison
Fraction	A fraction is a number that can be expressed as a proportion of two whole numbers. For example, $\frac{1}{2}$ and $\frac{3}{4}$ are both fractions.

Multiple	If one number is a multiple of a smaller number, it can be exactly divided by that smaller number.
Scale factor	A number which tells you how much a shape has been enlarged by.
Enlarge ment	The process of changing the size of a shape. Whilst keeping the angles the same.