



Knowledge

- Using ratio language
- Ratio and fractions
- Introducing the ratio symbol

Skills

- Calculating ratio
- Using scale factors
- Calculating scale factors
- Ratio and proportion problems

Vocabulary

Ratio, proportion, part, whole, scale factor, enlargement, similar shape, length, width, perimeter, scale factor, equation, quantity, :

Ratio Language and Symbol

For every 1 circle, there are 2 triangles.



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



Ratio and Fractions



For every 1 rugby ball, there are 2 footballs.

Rugby balls to footballs: 1:2.

1/3 of the balls are rugby balls as there is one out of three.

Problem Solving



In a bag of 15 sweets, there is 1 smiley face sweet for every 4 love heart sweets.

Therefore, there will be 3 smiley face sweets and 12 love heart sweets in the bag.

To use the ingredients for 1 person, you divide all the quantities by 10 ($\div 10$).

Ingredients for Fruit Smoothie
(serves 10 people)

- 800g of bananas
- 500g of strawberries
- 200g of raspberries
- 700ml of milk
- 300ml of natural yogurt

To use the ingredients for 5 people, you halve all the quantities ($\div 2$).

To use the ingredients for 20 people, you double all the quantities ($\times 2$).

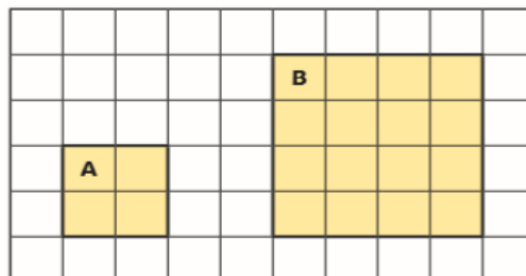
Inspirational Mathematician

David Hilbert
(1862-1943)



David Hilbert was a German mathematician and one of the most influential mathematicians of the 19th and early 20th centuries. Hilbert discovered and developed a broad range of fundamental ideas in many areas, including algebraic number theory and the foundations of geometry.

Scale Factor



Scale factors is where a shape is enlarged but keeps its original shape.

Shape A has been enlarged by a scale factor of 2 to make shape B.

Therefore, Shape B is now two times as big as shape A.

This can be done with any number. For example, a scale factor of 3 would make the shape three times as big as the original shape.