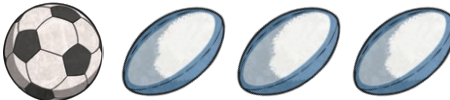
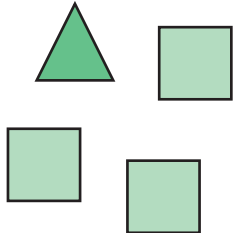


| Ratio                       |                                                                                                                                                                                                                                                      | Knowledge Organiser                                                                                                                                                                                                                                                                          |                  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Key Vocabulary              |                                                                                                                                                                                                                                                      | Ratio Language                                                                                                                                                                                                                                                                               | The Ratio Symbol |
| ratio                       | <p>For every 1 circle, there are 2 triangles.</p>                                                                                                                  |  <p>The ratio of footballs to rugby balls: 1:4</p> <p>The ratio of rugby balls to footballs: 4:1</p>                                                                                                      |                  |
| proportion                  |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |                  |
| “for every... there are...” |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |                  |
| part                        | <p>For every 2 bananas, there are 3 apples.</p>                                                                                                                    |  <p>The ratio of circles to triangles: 2:3</p> <p>The ratio of triangles to circles: 3:2</p>                                                                                                              |                  |
| whole                       | <p>For every 1 football, there are 3 rugby balls.</p>                                                                                                               |                                                                                                                                                                                                                                                                                              |                  |
| scale factor                |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |                  |
| enlargement                 | Ratio and Fractions                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                              |                  |
| similar shapes              |  <p>For every 1 rugby ball, there are 2 footballs.</p> <p>Ratio of rugby balls to footballs: 1:2</p> <p><math>\frac{1}{3}</math> of the balls are rugby balls.</p> |  <p>The ratio of apples to bananas: 1:2</p> <p>The ratio of bananas to oranges: 2:3</p> <p>The ratio of apples to bananas to oranges: 1:2:3</p> <p>The ratio of oranges to bananas to apples: 3:2:1</p> |                  |
| length                      |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |                  |
| width                       |                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |                  |
| perimeter                   |  <p>For every 1 triangle, there are 3 squares.</p> <p>Ratio of triangles to squares: 1:3</p> <p><math>\frac{1}{4}</math> of the shapes are triangles.</p>         |                                                                                                                                                                                                                                                                                              |                  |

# Ratio

# Knowledge Organiser

## Ratio and Proportion Problem-Solving

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 ( $\div 2$ ).

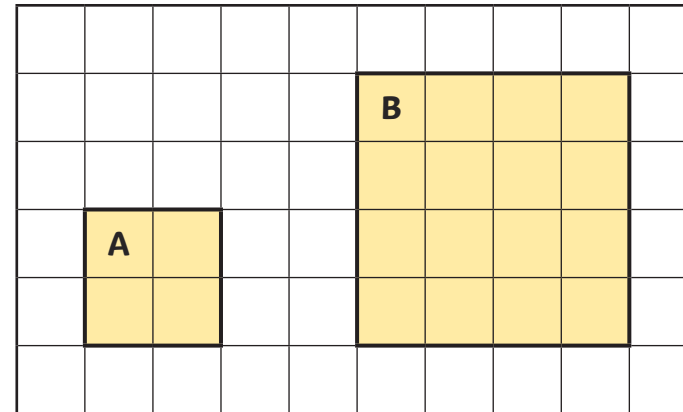
To use the ingredients for 20 people, you double all the quantities ( $\times 2$ ).

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.



## Scale Factors



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

Shape B is now two times as big as Shape A.

Shape B has been enlarged from Shape A by a scale factor of 3.

Shape B is now three times as big as Shape A.

