

Year 6 – Spring Block 6 – Ratio
Hello, Year 6, it's Tuesday 5th May.

Part 3

WALT Solve Ratio And Proportion Problems

(This is the last of our ratio sessions – tomorrow we are moving onto some lessons on statistics.)
See my green notes to help you.

Problem Solving 1

Isla is decorating a cake.

She needs 2 packs of purple sweets for every 5 packs of chocolate buttons.

1 pack of purple sweets costs £1.20

1 pack of chocolate buttons costs £1.22

She has spent £25.50 in total.

How many packs of each has she bought?

Problem Solving 1

Isla is decorating a cake.

She needs 2 packs of purple sweets for every 5 packs of chocolate buttons.

1 pack of purple sweets costs £1.20

1 pack of chocolate buttons costs £1.22

She has spent £25.50 in total.

How many packs of each has she bought?

6 packs of purple sweets; 15 packs of chocolate buttons

Work out the cost of 2 packs of purple sweets and 5 packs of chocolate buttons $(£1.20 \times 2) + (£1.22 \times 5) = £8.50$

Now, divide the total money spent (£25.50) by £8.50. The answer is 3. So, you need to work out 3 lots of 2 to tell you how many bags of purple sweets were bought and 3 lots of 5 to tell you how many chocolate buttons were bought.

Reasoning 1

**A smoothie recipe serves 2 people.
It says to use 4 cherries, 5 apples and 2 bananas.**

Will says,



**To serve 10 people I will
need 50 pieces of fruit in
total.**

Charlie says,



**To serve 10 people I will
need to use 25 apples.**

Who is correct? Explain your answer.

Reasoning 1

**A smoothie recipe serves 2 people.
It says to use 4 cherries, 5 apples and 2 bananas.**

Will says,



**To serve 10 people I will
need 50 pieces of fruit in
total.**

Charlie says,



**To serve 10 people I will
need to use 25 apples.**

Who is correct? Explain your answer.

Charlie is correct because...

Reasoning 1

A smoothie recipe serves 2 people.
It says to use 4 cherries, 5 apples and 2 bananas. *So that's 11 pieces of fruit per 2 people.*

Will says,



To serve 10 people I will need 50 pieces of fruit in total. *Wrong because $11 \times 5 = 55$, not 50.*

To serve 10 people I will need to use 25 apples. *Correct because 5 apples serves 2, so multiply 2 by 5 to serve 10 people.*

Charlie says,



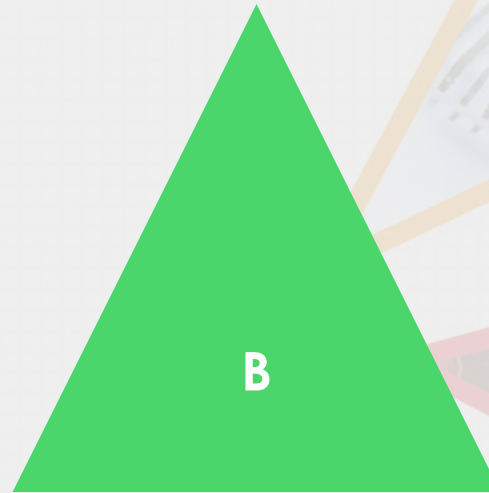
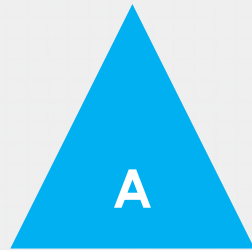
Who is correct? Explain your answer.

Charlie is correct because the recipe has increased by a scale factor of 5 so he will need 20 cherries, 25 apples and 10 bananas, which is 55 pieces of fruit altogether.

Problem Solving 2

Below are 2 equilateral triangles. Triangle B has been enlarged from triangle A by a scale factor of 9. Remember that equilateral triangles have 3 equal sides.

Calculate the perimeter of each triangle. NOT TO SCALE



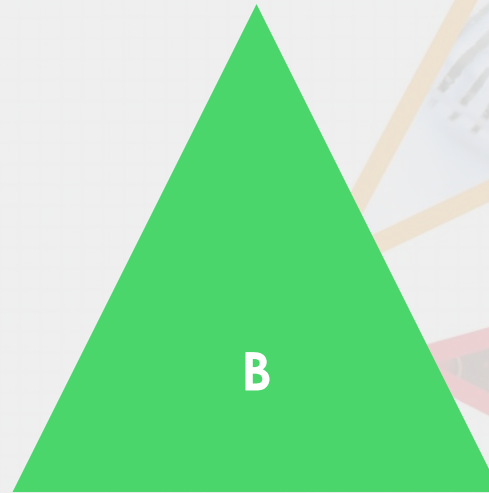
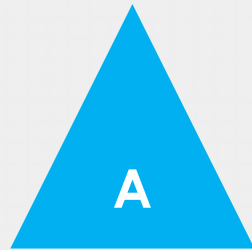
33cm

Not to scale

Problem Solving 2

Below are 2 equilateral triangles. Triangle B has been enlarged from triangle A by a scale factor of 9.

Calculate the perimeter of each triangle.



33cm

A. $P = 11\text{cm}$ and B. $P = 99\text{cm}$

Start with B because that has the labelled side. $3 \times 33 = 99$. B is 9 times larger than A, so divide B's perimeter by 9. $99 \div 9 = 11\text{cm}$

Not to scale

Well done! It's over to you now.

Go to Part 4 and choose your Star Challenge! Normal rules apply: page 1 will give you an easier challenge, page 2 will be about the same as what we've just practised and page 3 will be more of a stretch.

You only need to do the first three questions on your chosen Star Challenge – the ones on the left-hand side. If you want extra practice, you can then do the three questions on the right hand side of your chosen challenge page. When you finish, don't forget to mark your answers before sharing, so I can see where you need help.