

Ratio and Proportion Problems

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4a. Millie is decorating a cake.

She needs 3 packs of blue sweets for every 2 packs of chocolate buttons.

1 pack of blue sweets costs 75p.
1 pack of chocolate buttons costs 80p.

She has spent £7.70 in total.

How many packs of each has she bought?



PS

4b. Hannah is decorating a cake.

She needs 4 packs of sugar flowers for every 5 packs of chocolate buttons.

1 pack of sugar flowers costs 90p.
1 pack of chocolate buttons costs £1.05.

She has spent £17.70 in total.

How many packs of each has she bought?



PS

5a. A smoothie recipe serves 2 people. It says to use 3 cherries, 5 grapes and 2 bananas.

Jaxon says,

To serve 8 people I will need 44 pieces of fruit in total.



Harry says,

To serve 8 people I will need to use 20 grapes.



Who is correct? Explain your answer.



R

5b. A smoothie recipe serves 3 people. It says to use 2 apples, 3 kiwis and 4 mangoes.

Mia says,

To serve 15 people I will need 45 pieces of fruit in total.



Flo says,

To serve 15 people I will need to use 20 mangoes.



Who is correct? Explain your answer.



R

6a. Below are two equilateral triangles. Triangle B has been enlarged from triangle A by a scale factor of 5.

Calculate the perimeter of each triangle.



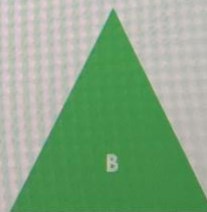
30cm

Not to scale

PS

6b. Below are two equilateral triangles. Triangle B has been enlarged from triangle A by a scale factor of 7.

Calculate the perimeter of each triangle.



49cm

Not to scale

PS

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7a. Lucy is making photo frames using buttons. She needs 5 red buttons for every 3 blue and 4 yellow buttons.

The costs are as follows:

Red: 45p each
Blue: 90p each
Yellow: 25p each

She has spent £17.85 in total.

How many of each has she bought?



PS

7b. Molly is making photo frames using sequins. She needs 7 red sequins for every 5 blue and 2 yellow sequins.

The costs are as follows:

Red: 60p each
Blue: 70p each
Yellow: 50p each

She has spent £34.80 in total.

How many of each has she bought?



PS

8a. To create 10 cards the instructions say to use 20 straws, 50 sequins and 2 pots of glitter.

Lily says,

To make 3 cards I will need 6 straws, 15 sequins and two fifths of a pot of glitter.



Hafsa says,

To make 4 cards I will need 8 straws, 20 sequins and four fifths of a pot of glitter.



Who is correct? Explain your answer.



8b. To create 6 cards the instructions say to use 6 straws, 24 sequins and 3 pots of glitter.

Evan says,

To make 10 cards I will need 10 straws, 40 sequins and 5 pots of glitter.



Joe says,

To make 1 card I will need 1.5 straws, 8 sequins and 1 pot of glitter.



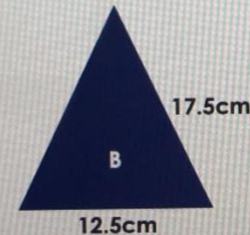
Who is correct? Explain your answer.



R

9a. Below are two isosceles triangles. Triangle B has been enlarged from triangle A by a scale factor of 2.5

Calculate the perimeter of each triangle.



17.5cm

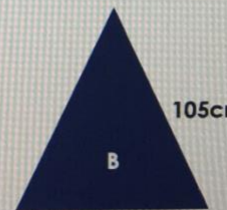
12.5cm

Not to scale

PS

9b. Below are two isosceles triangles. Triangle B has been enlarged from triangle A by a scale factor of 7.

Calculate the perimeter of each triangle.



105cm

70.7cm

Not to scale

PS