

Ratio and Proportion 4.2.21

1.

A machine pours 250 millilitres of juice every 4 seconds.

How many **litres** of juice does the machine pour every **minute**?

Show
your
method

litres

2 marks

2.



The International Space Station orbits the Earth at a height of 250 miles.

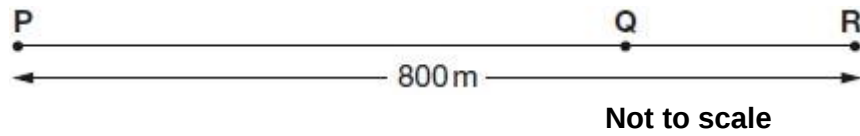
What is the height of the International Space Station in **kilometres**?

Use 8 kilometres equals 5 miles.

km

1 mark

3.



The distance from point **P** to point **R** is 800 metres.

The distance from point **P** to point **Q** is **4 times** the distance from point **Q** to point **R**.

Olivia says,

It is 600 metres from
point **P** to point **Q**.



Explain why Olivia is **not** correct.

A large, empty, cloud-shaped box for writing an explanation.

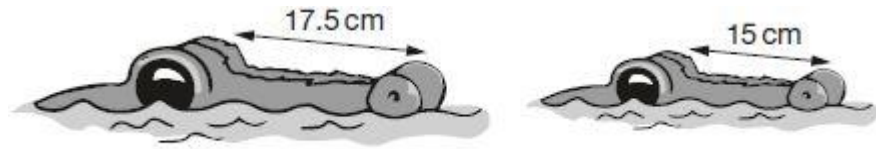
1 mark

4.

The length of an alligator can be estimated by:

- measuring the distance from its eyes to its nose
- then multiplying that distance by 12

What is the **difference** in the estimated lengths of these two alligators?



Not to scale

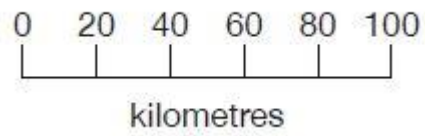
Show your method

cm

2 marks

5.

On a map, 1 cm represents 20 km.



The distance between two cities is **250 km**.

On the map, what is the distance between the two cities?

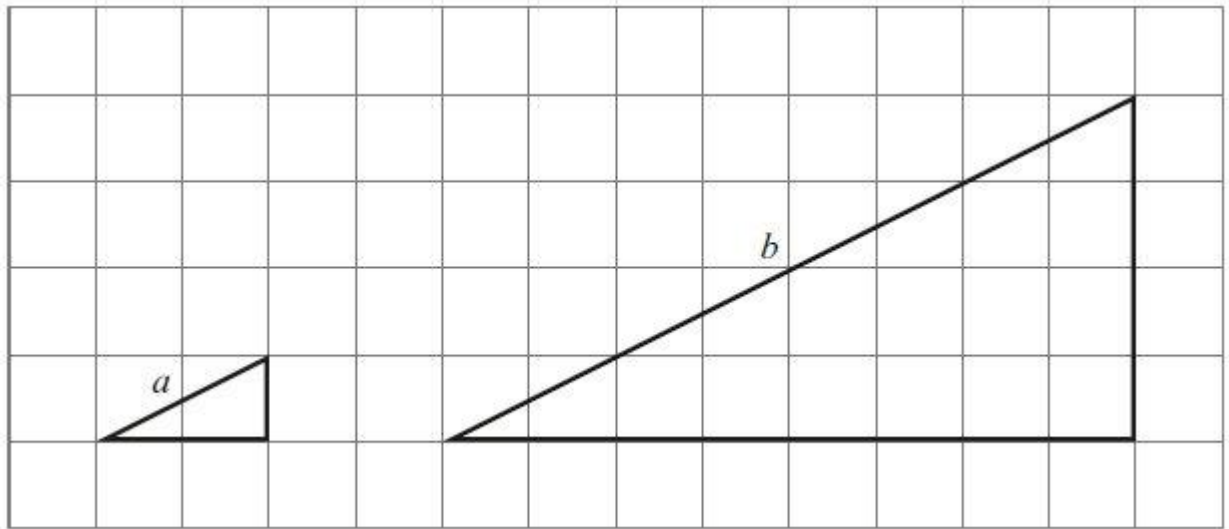
Show your method

cm

2 marks

6.

Here are two similar right-angled triangles.



Write the ratio of side a to side b .

$$a : b = \boxed{ : }$$

1 mark

7.

On Saturday Lara read $\frac{2}{5}$ of her book.



On Sunday she read the **other** 90 pages to finish the book.

How many pages are there in Lara's book?

Show your method

2 marks

8.

Here are the ingredients for chocolate ice cream.

cream	400 ml
milk	500 ml
egg yolks	4
chocolate	120 g
sugar	100 g



Stefan has only 300 ml of cream to make chocolate ice cream.

How much **chocolate** should he use?

Show
your
method

g

2 marks

9.

Two numbers are in the ratio **4 : 5**

One of the numbers is **60**

There are two possible values for the other number.

What are the two possible values?

2 marks