Algebra - Indices

Q1

The diagram shows two similar triangles.

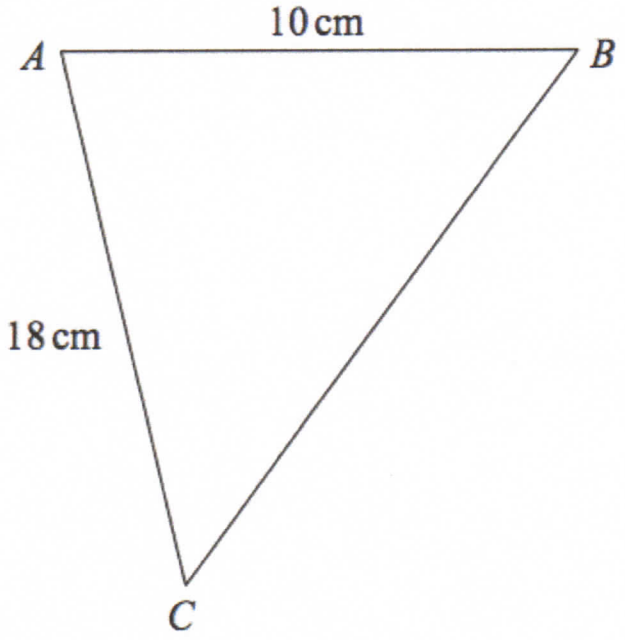
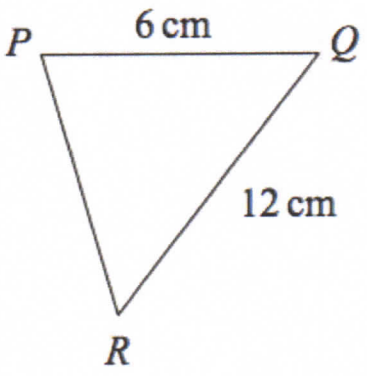


Diagram **NOT** accurately drawn



In triangle ABC, $AB = 10$ cm and $AC = 18$ cm.
In triangle PQR, $PQ = 6$ cm and $QR = 12$ cm.

Angle ABC = angle PQR.
Angle CAB = angle RPQ.

(a) Calculate the length of BC.

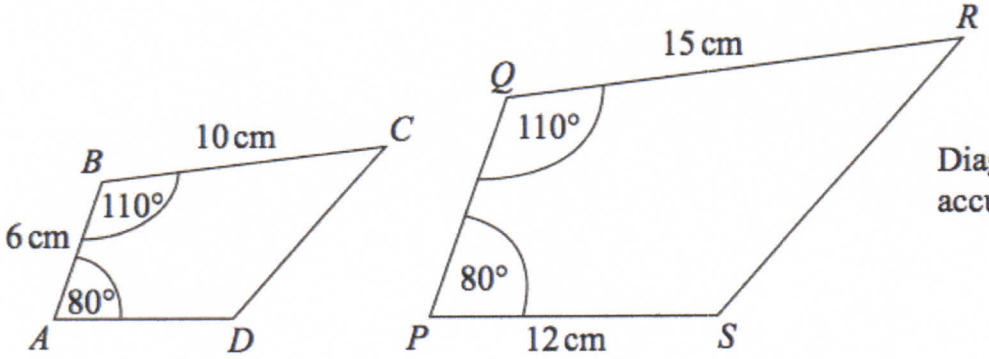
..... cm
(2)

(b) Calculate the length of PR.

..... cm
(2)

Algebra - Indices

Q2



Diagrams **NOT** accurately drawn

ABCD and *PQRS* are mathematically similar.

(a) Find the length of *PQ*.

..... cm
(2)

(b) Find the length of *AD*.

..... cm
(2)

Algebra - Indices

Q1

The diagram shows two similar triangles.

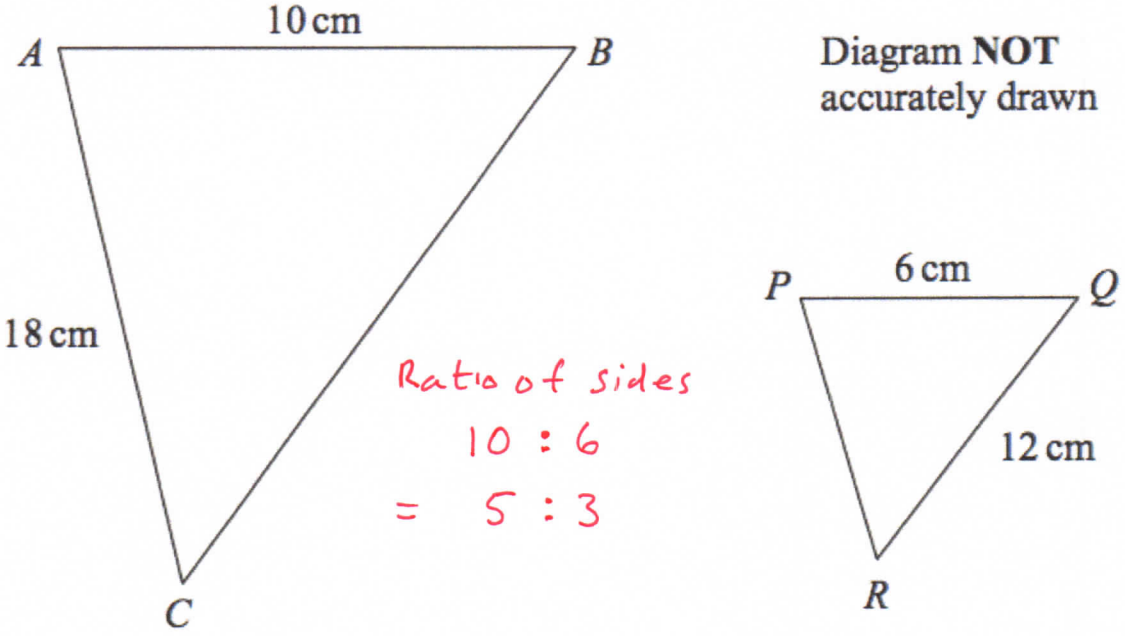


Diagram **NOT** accurately drawn

Ratio of sides
10 : 6
= 5 : 3

In triangle ABC, $AB = 10$ cm and $AC = 18$ cm.
In triangle PQR, $PQ = 6$ cm and $QR = 12$ cm.

Angle ABC = angle PQR.
Angle CAB = angle RPQ.

(a) Calculate the length of BC.

$BC = QR \times \frac{5}{3}$

$= 12 \times \frac{5}{3} = 20$ cm

20 ..... cm
(2)

(b) Calculate the length of PR.

$PR = AC \times \frac{3}{5}$

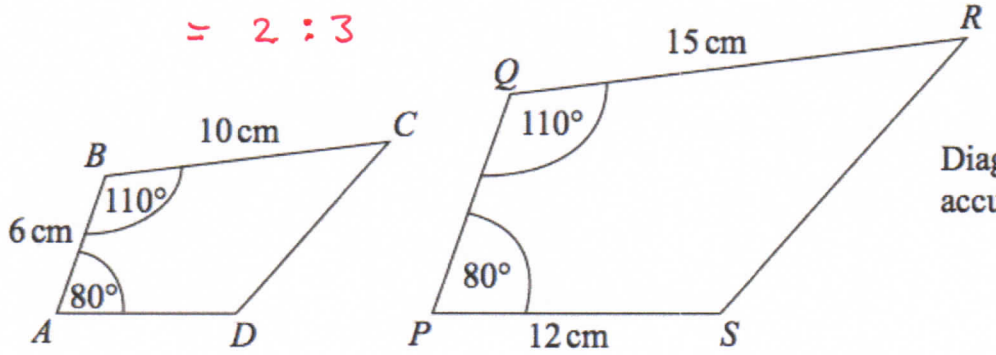
$= 18 \times \frac{3}{5} = \frac{54}{5} = 10.8$ cm

10.8 ..... cm
(2)

Algebra - Indices

Q2

Ratio of sides
10 : 15
= 2 : 3



Diagrams **NOT** accurately drawn

ABCD and *PQRS* are mathematically similar.

(a) Find the length of *PQ*.

$PQ = AB \times \frac{3}{2}$

$= 6 \times \frac{3}{2} = 9$ cm

9 ..... cm
(2)

(b) Find the length of *AD*.

$AD = PS \times \frac{2}{3}$

$= 12 \times \frac{2}{3} = 8$ cm

8 ..... cm
(2)