

Similarity

This exercise covers the following Basic Competency Descriptors for new KS3 curriculum.

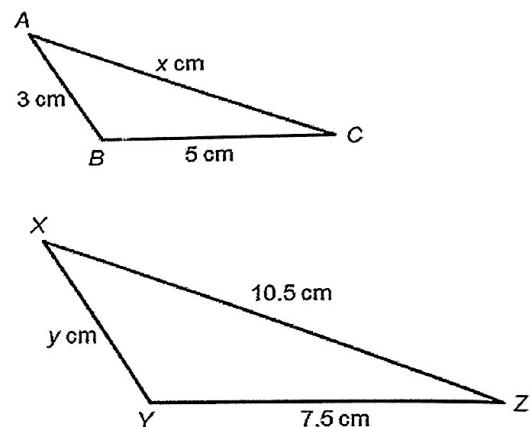
MSS22-1	Demonstrate recognition of the properties of similar triangles.
MSS22-2	Demonstrate recognition of the conditions for similar triangles.
MSS22-3	Use the conditions for similar triangles to perform simple proofs.

Section A: Write your answers in the spaces provided. Working need not be shown.

MSS22-1

1. In the figure, $\triangle ABC \sim \triangle XYZ$. Find

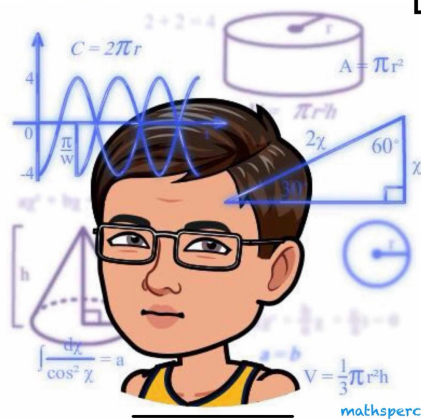
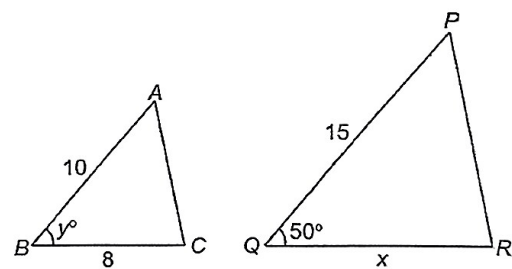
- (a) the value of x ,
 (b) the value of y .
 (a) $x =$ _____
 (b) $y =$ _____



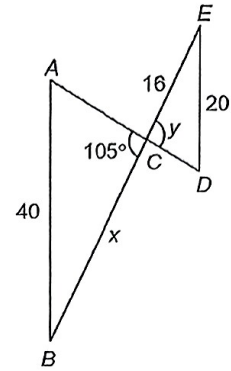
MSS22-1

2. In the figure, $\triangle ABC \sim \triangle PQR$. Find

- (a) the value of x ,
 (b) the value of y .
 (a) $x =$ _____
 (b) $y =$ _____

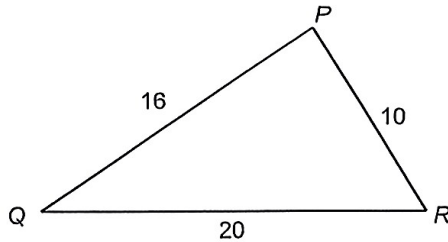
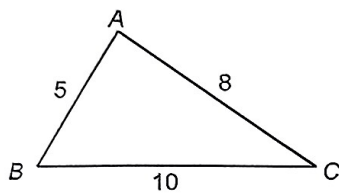


MSS22-1

3. In the figure, $\triangle ABC \sim \triangle DEC$. Find(a) the value of x ,(b) the value of y .(a) $x =$ _____(b) $y =$ _____

MSS22-2

4.



According to the given information in the above figure,

(a) identify whether $\triangle ABC$ and $\triangle PQR$ are congruent or similar triangles, and

(b) choose the correct reason.

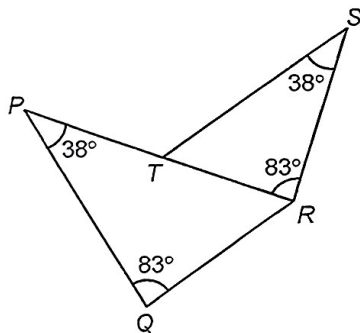
Circle the correct answer.

(a) $\triangle ABC \cong \triangle PQR$ / $\triangle ABC \sim \triangle PQR$

(b) SSS / SAS / ratio of 2 sides, included angle / 3 sides proportional

MSS22-2

5.

 PTR is a straight line.

According to the given information in the above figure,

(a) identify whether $\triangle PQR$ and $\triangle SRT$ are congruent or similar triangles, and

(b) choose the correct reason.

Circle the correct answer.

(a) $\triangle PQR \cong \triangle SRT$ / $\triangle PQR \sim \triangle SRT$

(b) AAS / ASA / AAA / 3 sides proportional

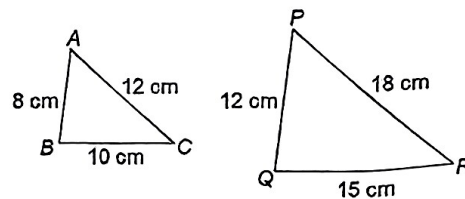
Section B: Answer in the spaces provided. All working and conclusions must be clearly shown.

MSS22-3

6. In the figure, $AB = 8$ cm, $BC = 10$ cm, $AC = 12$ cm,

$PQ = 12$ cm, $QR = 15$ cm and $PR = 18$ cm.

Prove that $\triangle ABC \sim \triangle PQR$.



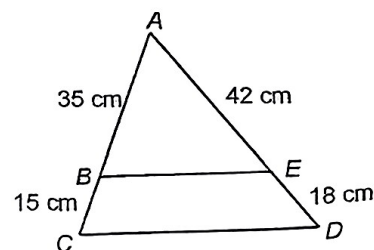
Large empty box for working and conclusions.

MSS22-3

7. In the figure, ABC and AED are straight lines. $AB = 35$ cm,

$AE = 42$ cm, $BC = 15$ cm and $ED = 18$ cm. Prove that

$\triangle ACD \sim \triangle ABE$.



Large empty box for working and conclusions.

MSS22-3

8. In the figure, AED and BCD are straight lines. $\angle ABD = \angle CED$.
Prove that $\triangle ABD \sim \triangle CED$.

