

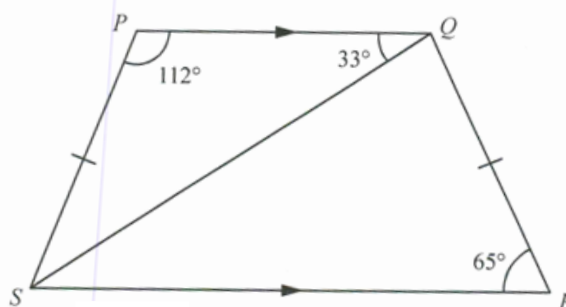
Class Test 4 »



Answer all questions. Show your working clearly.

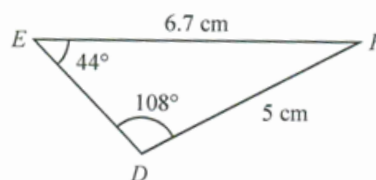
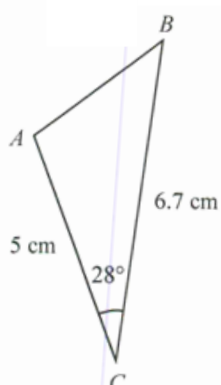
1. Are the following pairs of triangles congruent? Explain your answers.

(a)



[2]

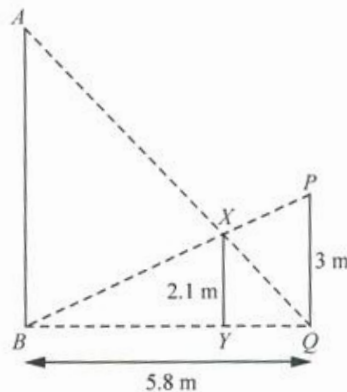
(b)



[2]

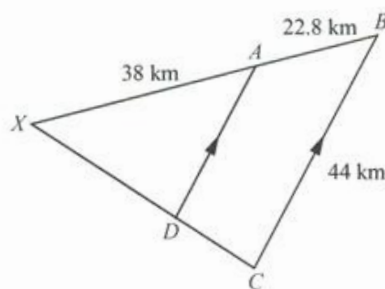
Chapter 7 • Congruence and Similarity

2. In the diagram below, there are two walls, AB and PQ , which are 5.8 m apart. A pole, XY , measuring 2.1 m tall, is placed between the walls. A , X and Q are on the same line and B , X and P are on the same line. The wall, PQ , is 3 m tall.



$\triangle XYQ$ and $\triangle ABQ$ are similar triangles, and $\triangle BXY$ and $\triangle BPQ$ are also similar triangles.

- (a) Find the distance between the wall, PQ , and the pole. [2]
 (b) Hence, find the height of the wall, AB . [1]
3. The diagram below shows towns A , B , C and D . X is a gas station. Town A is 38 km from the gas station and 22.8 km from town B . Town B is 44 km from town C .

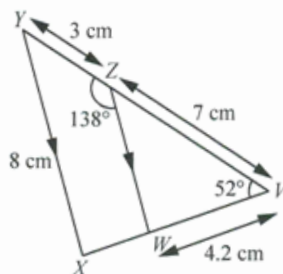


$\triangle ADX$ and $\triangle BCX$ are similar triangles.

- (a) Find the distance between town A and town D . [2]
 (b) Town C is 52.8 km from the gas station. Find the distance between town C and town D . [1]

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4.

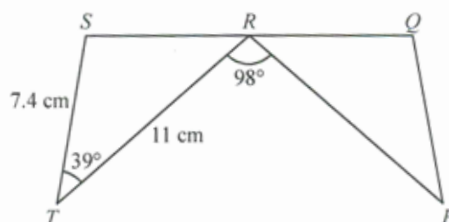


$\triangle VXY$ and $\triangle VWZ$ are similar triangles. Find

- (a) $\angle VXY$,
- (b) WZ ,
- (c) WX .

[2]
[2]
[1]

5.

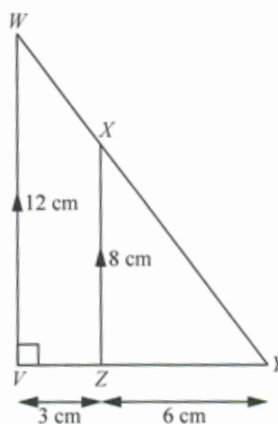


$\triangle PQR$ and $\triangle TSR$ are congruent triangles and QS is a straight line. Find

- (a) $\angle SRT$,
- (b) $\angle PQR$,
- (c) PQ .

[1]
[1]
[1]

6.

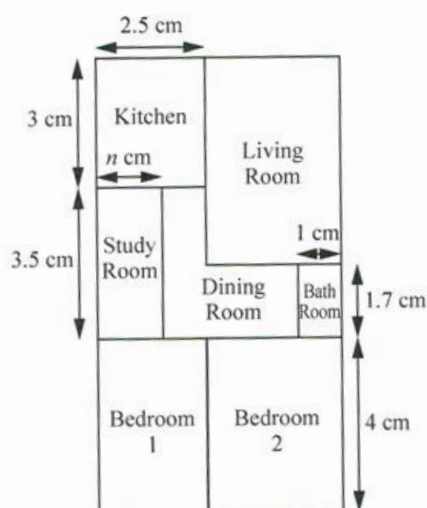


Is $\triangle XYZ$ similar to $\triangle WYV$? Explain your answer.

[2]

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7. The diagram below shows a floor plan of an apartment drawn with a scale of 1 : 120. The actual area of the study room is 7.56 m^2 .



- (a) Find the value of n . [2]
 - (b) Find the actual area of the dining room, in m^2 . [2]
 - (c) Find the actual area of the entire apartment, in m^2 . [2]
8. A rectangular field $WXYZ$ has the dimensions 350 m by 240 m.
- (a) Draw the field using the scale 1 : 5000 where WX represent the length of the field. [2]
 - (b) A cone is placed in the centre of the field at point M . Mark out M . [1]
 - (c) Find the actual distance of XM , in m. [1]