

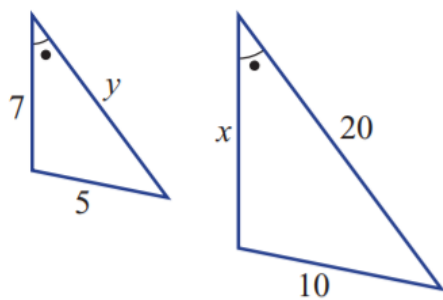
7 Each of the pairs of figures shown here are similar. For each pair find:

i a scale factor

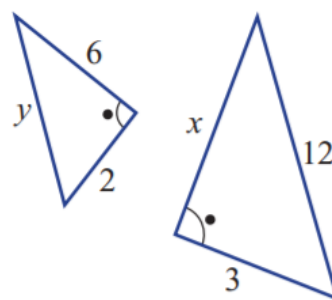
ii the value of x

iii the value of y

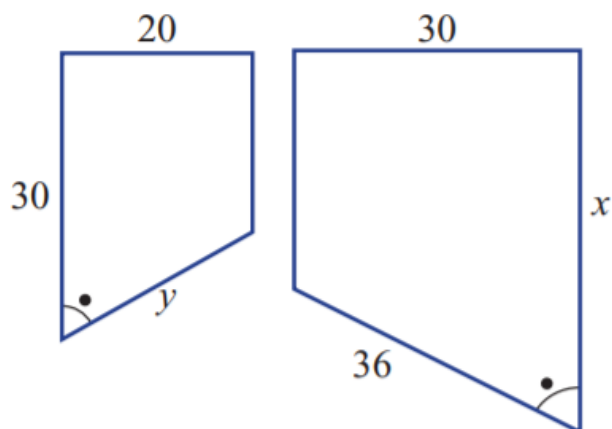
a



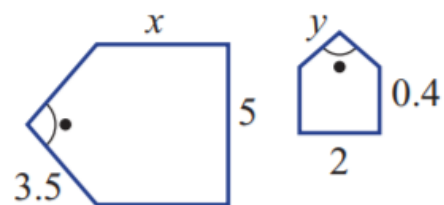
b



c



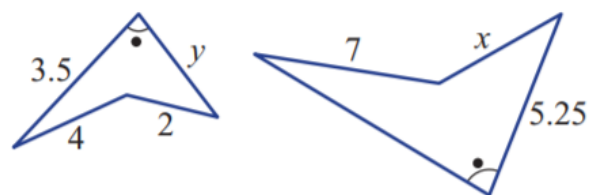
d



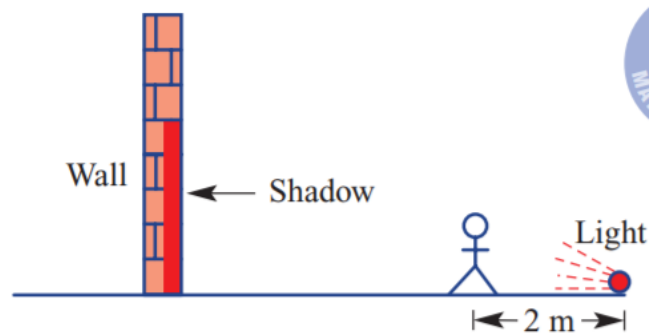
e



f



- 9** A person 1.8 m tall stands in front of a light that sits on the floor.
The person casts a shadow on the wall behind them.

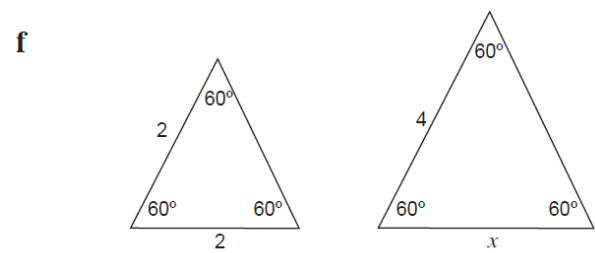
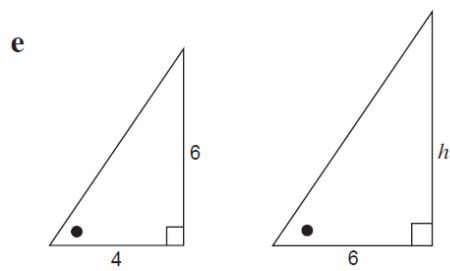
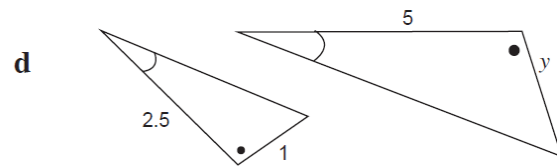
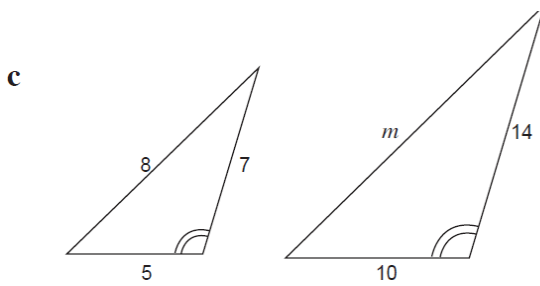
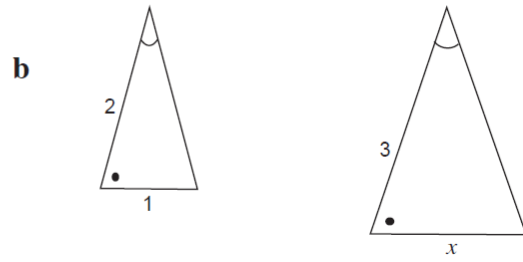
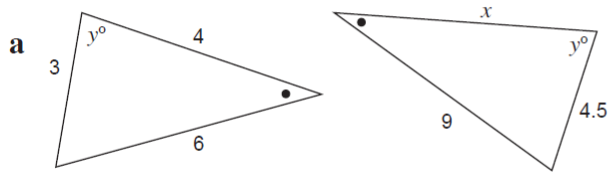


- a** How tall will the shadow be if the distance between the wall and the light is:
- i** 4 m?
 - ii** 10 m?
 - iii** 3 m?
- b** How tall will the shadow be if the distance between the wall and the person is:
- i** 4 m?
 - ii** 5 m?

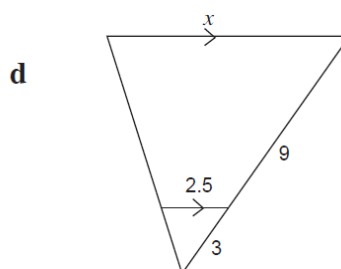
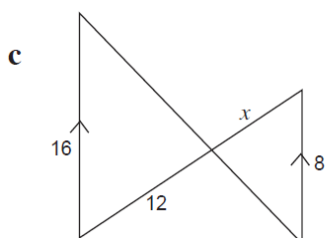
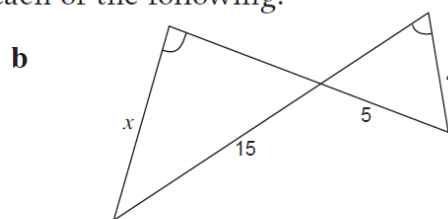
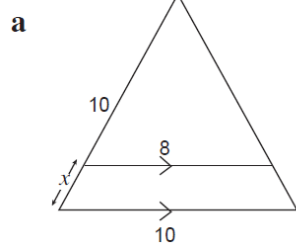
- 14** A map has a scale ratio of 1 : 50 000.

- a** What length on the ground is represented by 2 cm on the map?
- b** What length on the map is represented by 12 km on the ground?

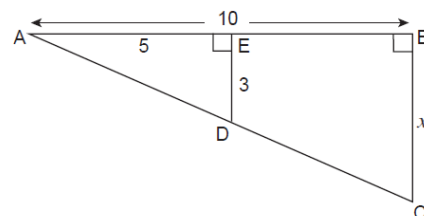
QUESTION 1 In each pair of triangles given below, use a test of similarity to find the value of the pronumeral.



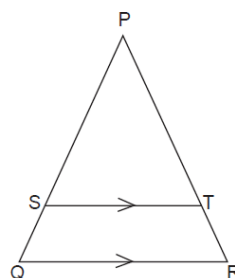
QUESTION 2 Find the value of the pronumeral in each of the following.



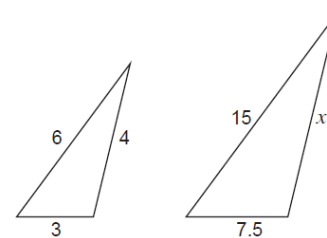
1. Name the pairs of similar triangles and find the value of x .



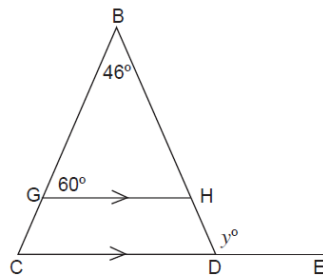
2 In $\triangle PQR$, ST is drawn parallel to QR .
Prove that $\triangle PST \parallel \triangle PQR$.



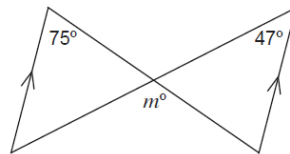
3 Find x in this pair of similar triangles.



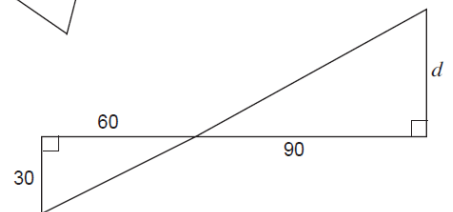
4 Find y .



5 Find m .

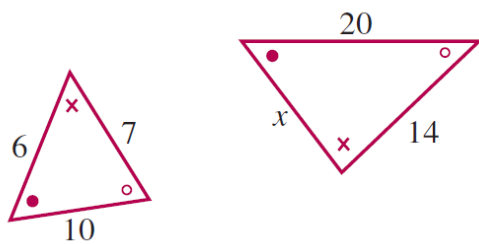


6 Find d in the diagram given opposite.

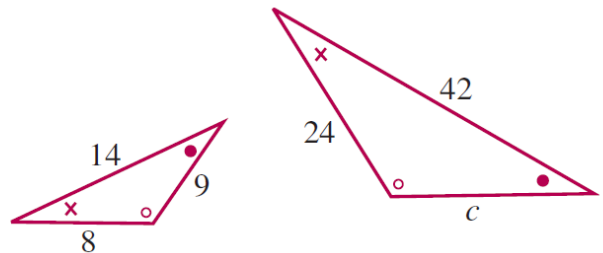


7 The triangles in each pair are similar. Find the value of the pronumeral. Give your answers as fractions or mixed numerals where necessary. All lengths are in mm.

a

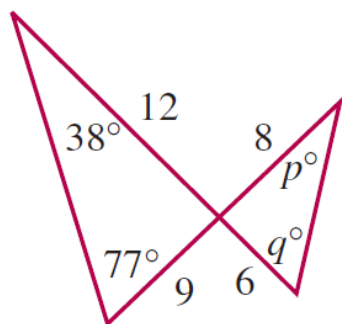


b

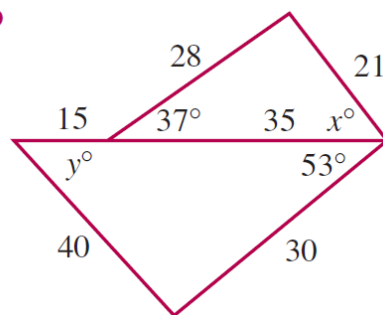


8 Explain why the triangles in each figure are similar. Hence find the value of all pronumerals.

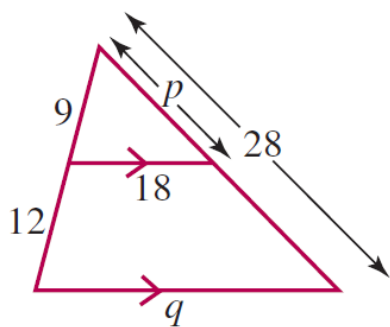
a



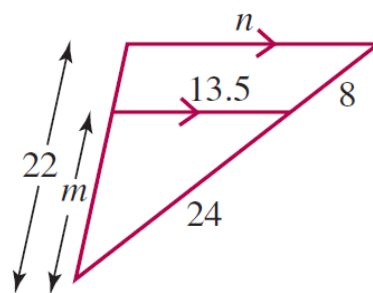
b



d



f



$PQRS$ is a parallelogram, with SP produced to T .
If $TP = 2$ cm, $QR = 3$ cm and $SR = 8$ cm, find the
length of UQ .

