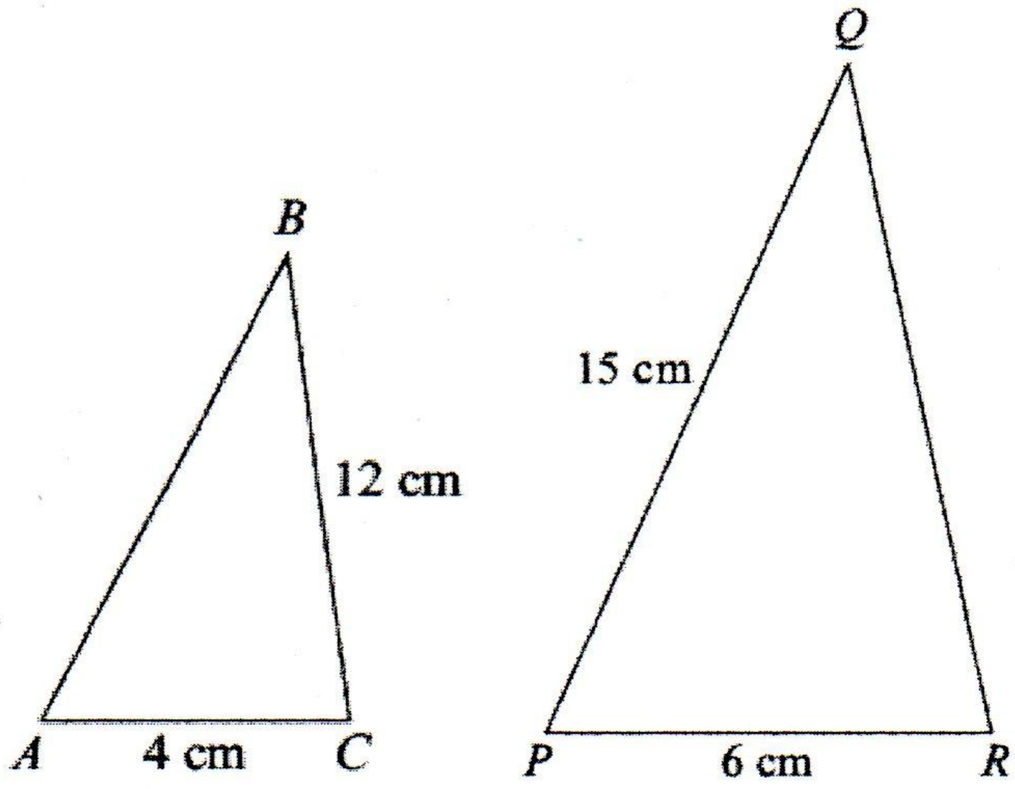
Similar shapes and tessellation

Similar Shapes

Two shapes are similar if their corresponding angles are equal. If two shapes are similar then their ratio of the sides are equal, which is also known as the scale factor of enlargement.

Q1.



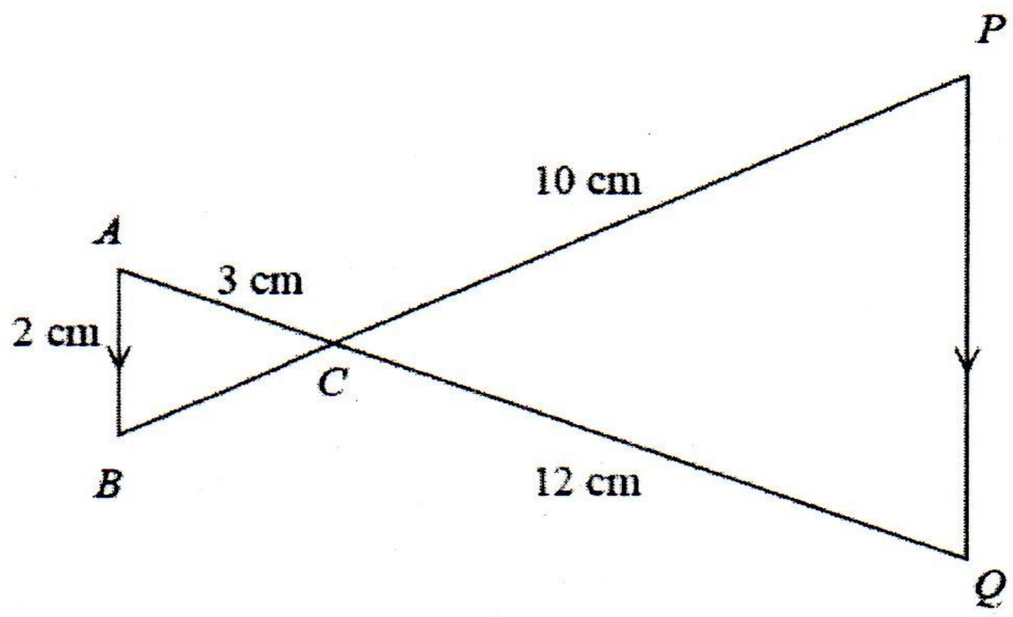
Triangles *ABC* and *PQR* are mathematically similar.
Angle *A* = angle *P*., Angle *B* = angle *Q*., Angle *C* = angle *R*.
AC = 4 cm. *BC* = 12 cm
(a) Work out the length of *QR*.

QR=_____

(b) Work out the length of *AB*.

AB=_____

Q2.



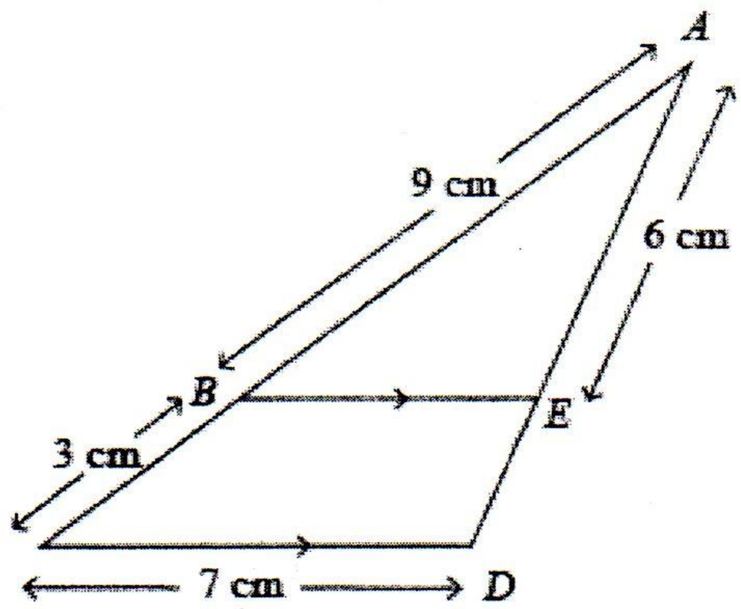
ACQ and *BCP* are straight lines.
AB is parallel to *PQ*.
AB = 2 cm. *AC* = 3 cm.
CQ = 12 cm.
CP = 10 cm.
(a) Work out the length of *PQ*.

..... cm

(b) Work out the length of *BP*.

..... cm

Q3,



BE is parallel to *CD*.
AB = 9 cm, *BC* = 3 cm, *CD* = 7 cm, *AE* = 6 cm.
(a) Calculate the length of *ED*.

..... cm

(b) Calculate the length of *BE*.

..... cm

Q4.

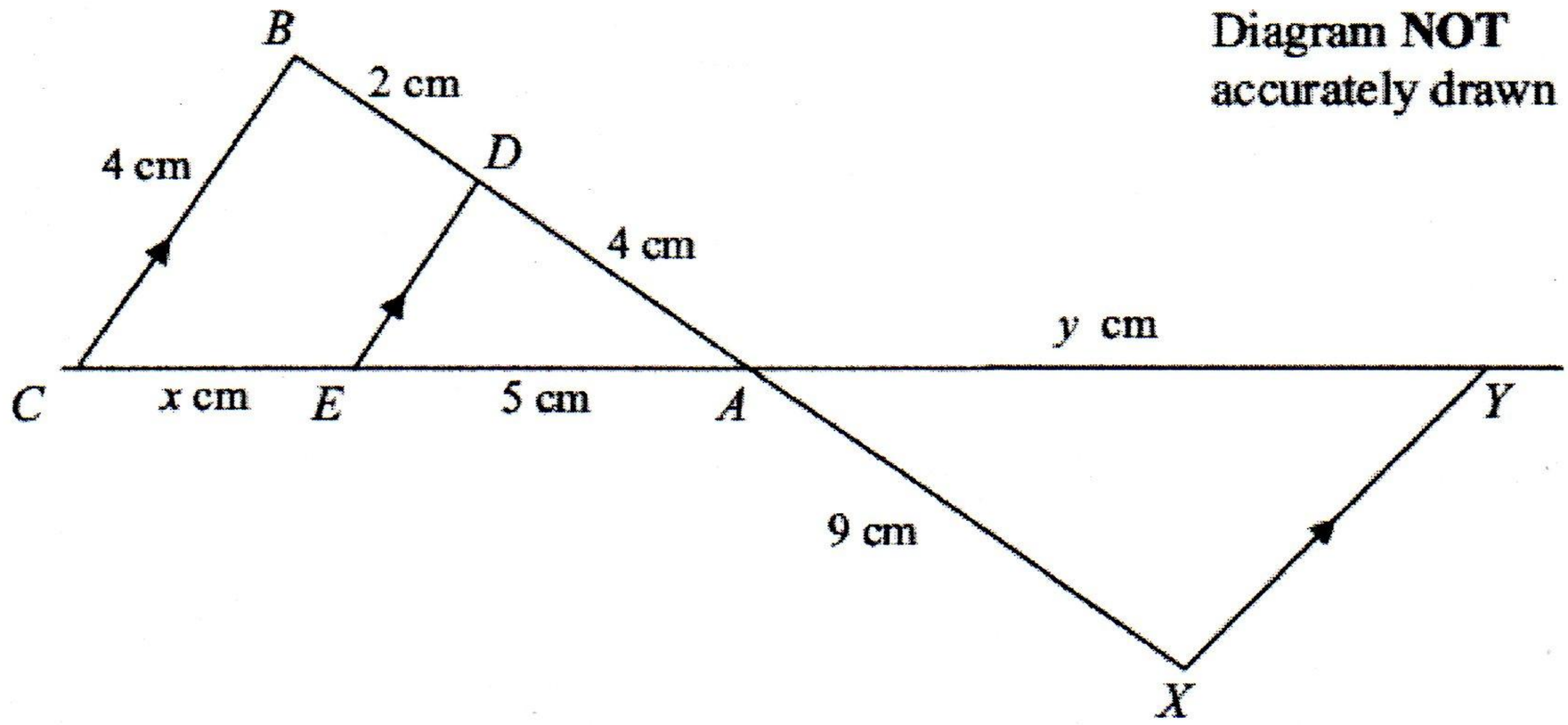


Diagram **NOT** accurately drawn

CEAY and *BDAX* are straight lines.
XY, *ED* and *CB* are parallel.
AE = 5 cm., *AX* = 9 cm.
AD = 4 cm.
BC = 4 cm.
BD = 2 cm.
CE = *x* cm.
XY = *y* cm.
Find the value of *x* and the value of *y*.
x =.....
y=.....