SIMILAR SHAPES – PRACTICE QUESTIONS
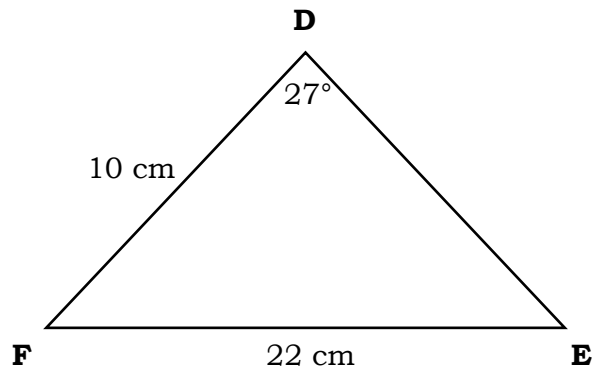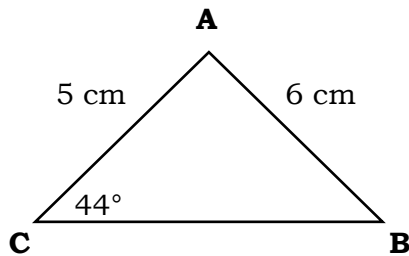
1.
Triangles ABC and DEF are similar shapes.

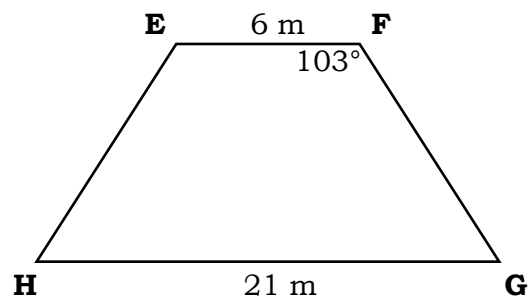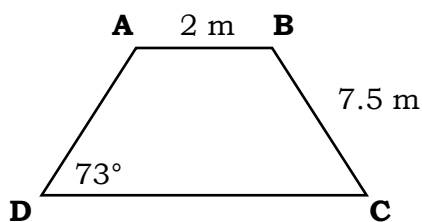(a) What is the size of angle CAB?

(b) What is the length of side DE?

(c) What is the size of angle DFE?

(d) What is the length of side CB?

2.
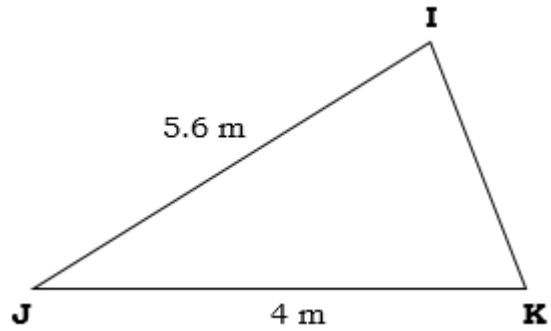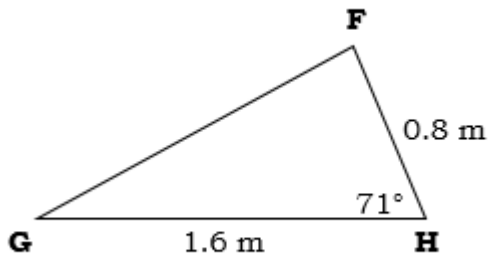Shapes ABCD and EFGH are mathematically similar.

(a) What is the length of side CD?

(b) What is the size of angle ABC?

(c) What is the length of side FG?

3.
Triangles FGH and IJK are mathematically similar.

(a) Find the size of angle IKJ.

(b) Find the length of line FG.
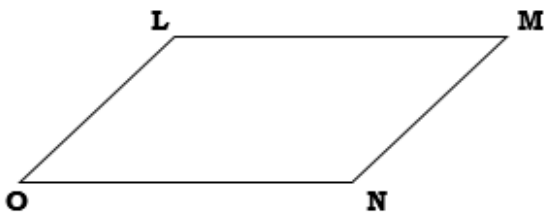
(c) Find the length of line IK.

4.
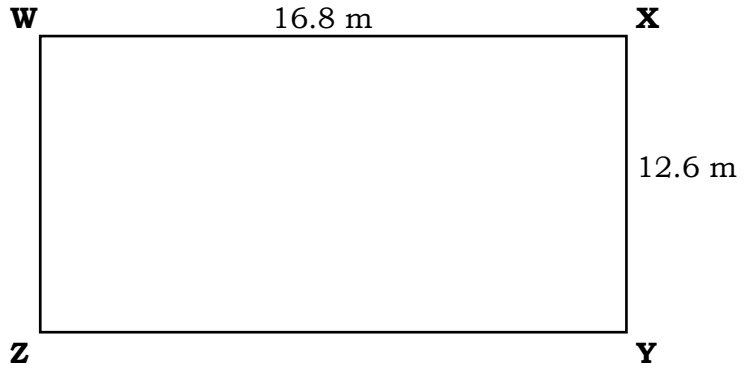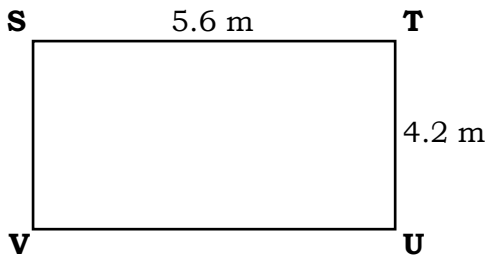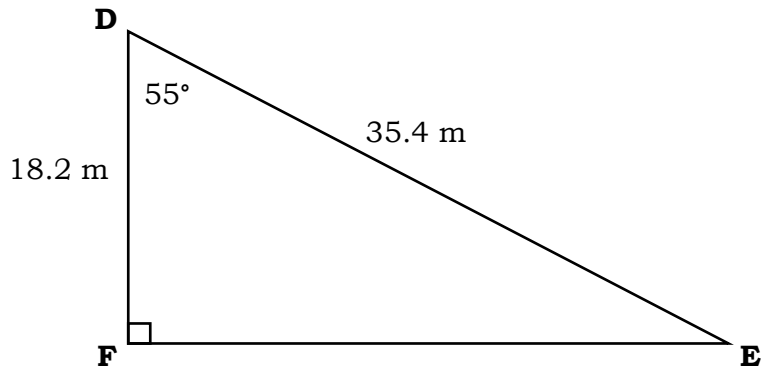Shapes LMNO and PQRS are mathematically similar parallelograms.
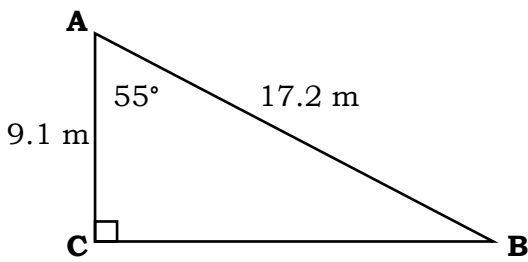LM = 5.5 m
QR = 6.2 m
PQ = 11 m

Find the perimeter of LMNO.

5.
STUV and WXYZ are rectangles.

S   5.6 m   T

4.2 m

V   U

W   16.8 m   X

12.6 m

Z   Y

Are STUV and WXYZ mathematically similar? Give a reason for your answer.

6.
ABC and DEF are triangles.

A

55°   17.2 m

9.1 m

C   B

D

55°

35.4 m

18.2 m

F   E

Are ABC and DEF mathematically similar? Give a reason for your answer.

7.
GHI and JKL are triangles.

G

68°   45°

I   H

J

67°

68°

L   K
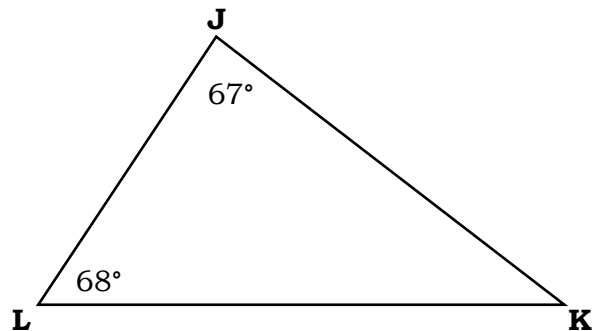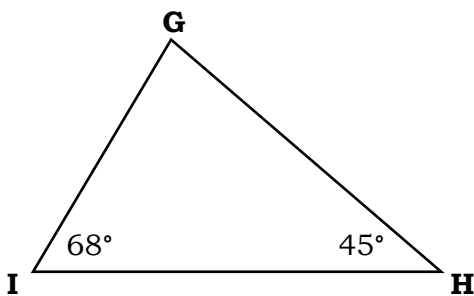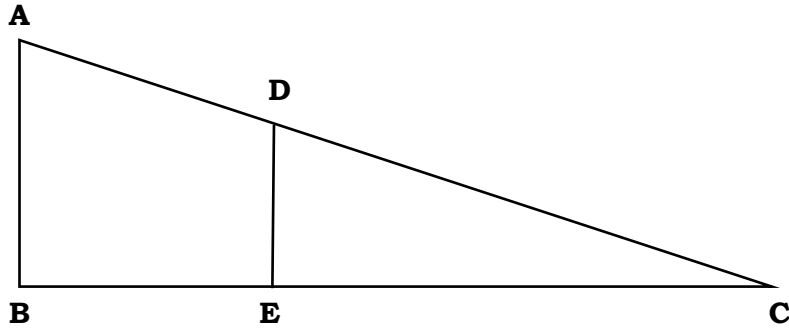
Are GHI and JKL mathematically similar? Give a reason for your answer.
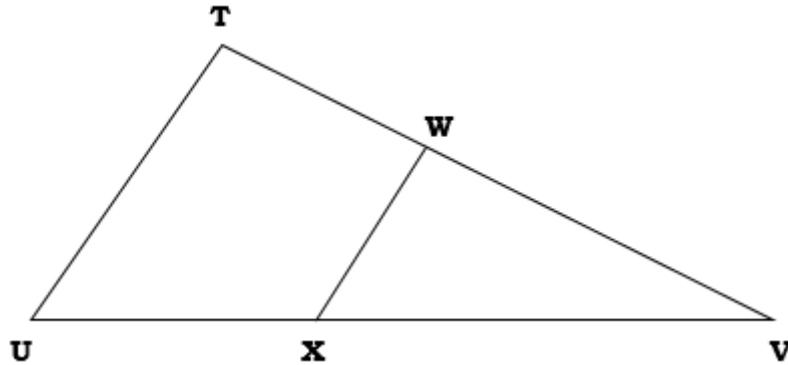
8.
ABC and DEC are mathematically similar triangles.

The length of line DC is 5 cm.
The length of line BC is 6 cm.
The length of line EC is 4 cm.
The length of line AB is 4.5 cm.

(a) Find the length of line DE.

(b) Find the length of line AC.

(c) Find the length of line AD.

9.
Triangles TUV and WXV are mathematically similar.

WX = 5 cm
UV = 19.5 cm
TU = 11 cm
XWV = 88°
WVX = 26°

(a) Find the size of angle TUV.

(b) Find the length of XV to one decimal place.