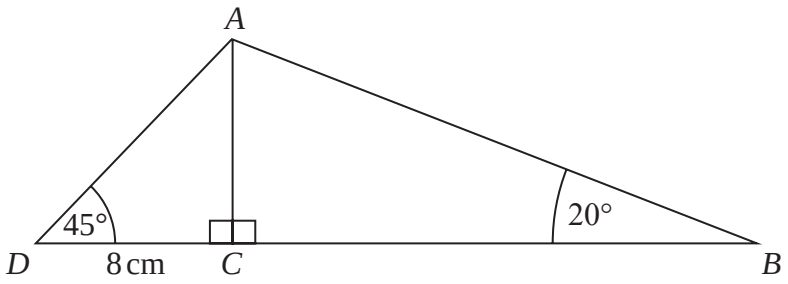
1 *ABC* and *ACD* are right-angled triangles.



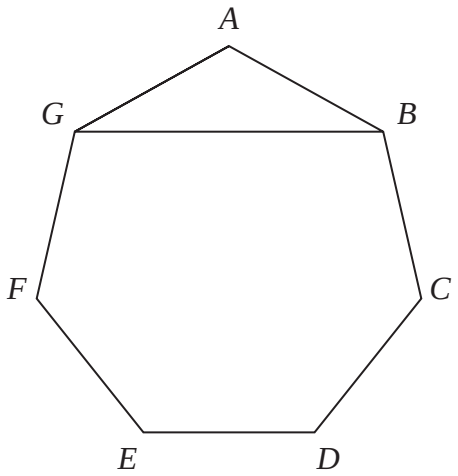
DC = 8 cm
Angle *ADC* = 45°
Angle *ABC* = 20°

Work out the length of *AB*.
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 1 is 3 marks)

2 *ABCDEFG* is a regular heptagon.



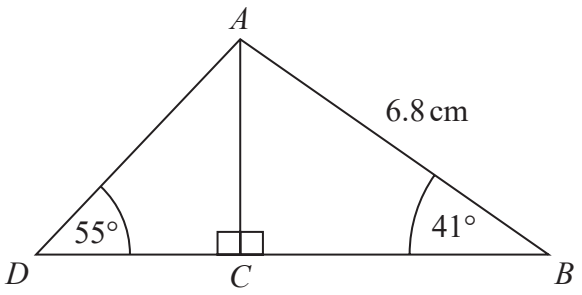
The area of triangle *ABG* is 30 cm^2

Calculate the length of *GB*.
Give your answer correct to 3 significant figures.
You must show all your working.

..... cm

(Total for Question 2 is 5 marks)

3 *ABD* is a triangle.
C is a point on *BD*.

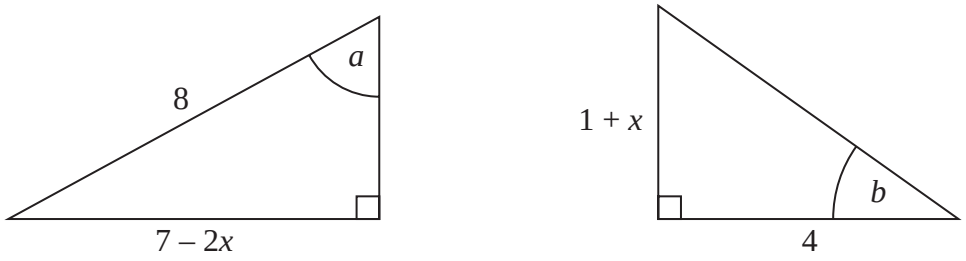


Work out the length of *DC*.
Give your answer correct to 1 decimal place.

..... cm

(Total for Question 3 is 3 marks)

4 The diagram shows two right-angled triangles.



All lengths are measured in centimetres.

Given that

$$\sin a = \tan b$$

work out the value of x.

$x =$ .....

(Total for Question 4 is 3 marks)