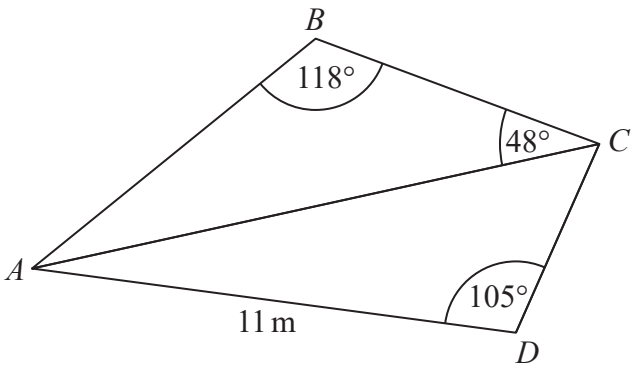
Autumn 2017 Paper 3 Q17

1 *ABC* and *ADC* are triangles.



The area of triangle *ADC* is 56 m^2

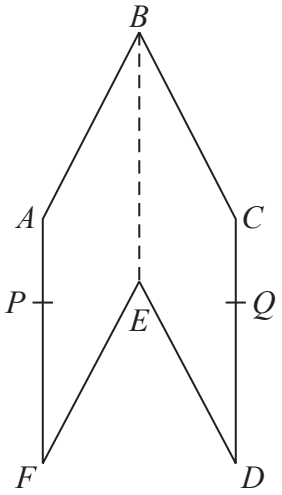
Work out the length of *AB*.
Give your answer correct to 1 decimal place.

..... m

(Total for Question 1 is 5 marks)

Summer 2017 Paper 1 Q22

2 The diagram shows a hexagon *ABCDEF*.



ABEF and *CBED* are congruent parallelograms where $AB = BC = x$ cm.
P is the point on *AF* and *Q* is the point on *CD* such that $BP = BQ = 10$ cm.

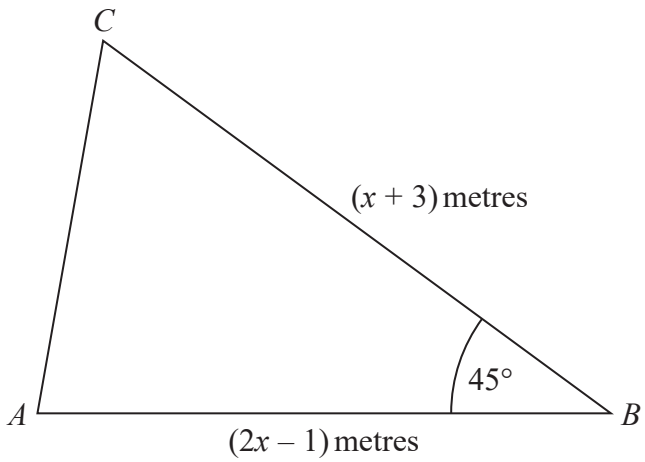
Given that angle $ABC = 30°$,

prove that $\cos PBQ \quad 1 \quad \frac{(2 \quad \sqrt{3})}{200} x^2$

(Total for Question 2 is 5 marks)

Summer 2017 Paper 3 Q15

3



The area of triangle ABC is $6\sqrt{2}$ m^2.

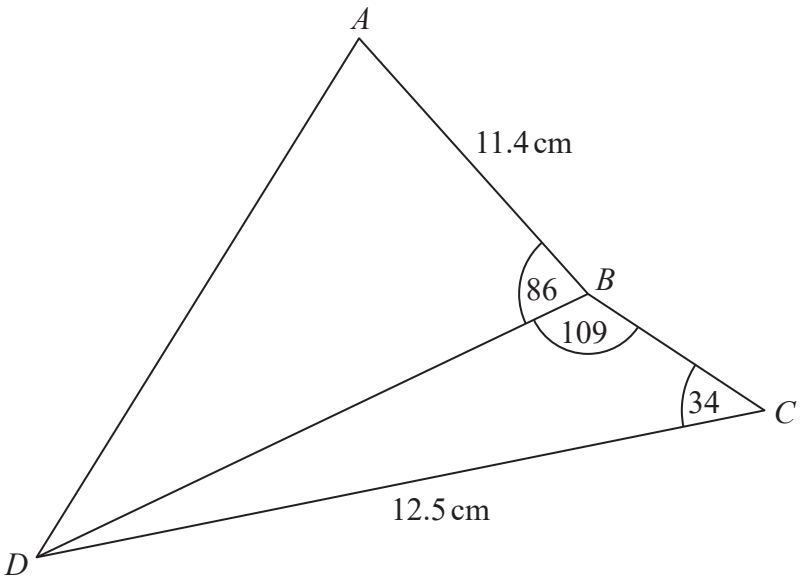
Calculate the value of x.
Give your answer correct to 3 significant figures.

.....

(Total for Question 3 is 5 marks)

Summer 2018 Paper 3 Q17

4



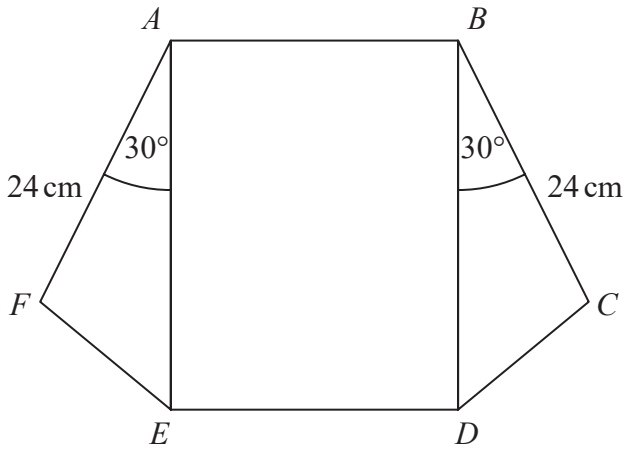
Work out the length of *AD*.
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 4 is 5 marks)

Summer 2019 Paper 3 Q14

5 The diagram shows a rectangle, *ABDE*, and two congruent triangles, *AFE* and *BCD*.



area of rectangle *ABDE* = area of triangle *AFE* + area of triangle *BCD*

$$AB : AE = 1 : 3$$

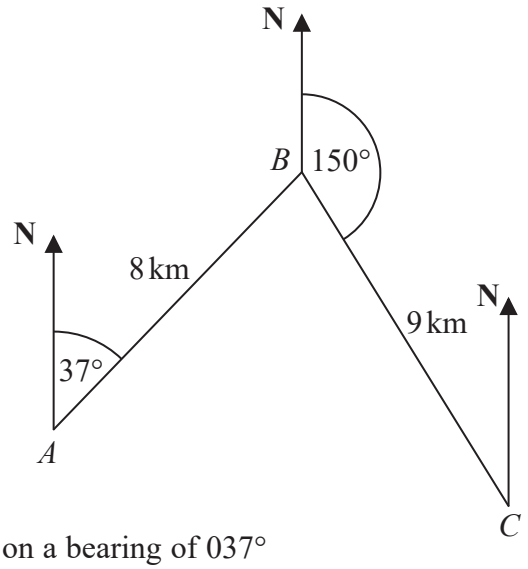
Work out the length of *AE*.

..... cm

(Total for Question 5 is 4 marks)

Summer 2019 Paper 3 Q23

6 The diagram shows the positions of three towns, Acton (A), Barston (B) and Chorlton (C).



Barston is 8 km from Acton on a bearing of 037°
Chorlton is 9 km from Barston on a bearing of 150°

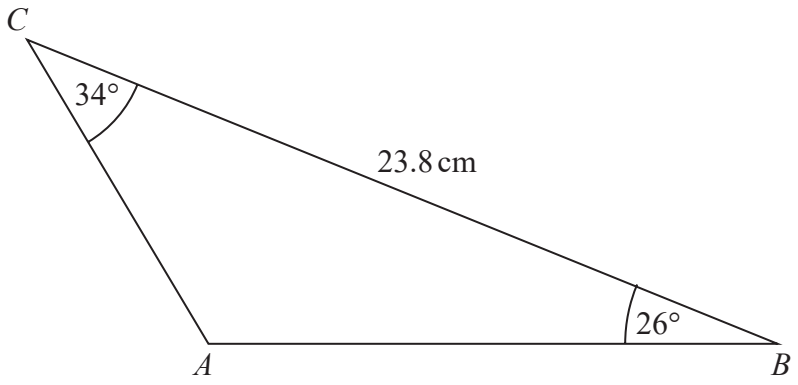
Find the bearing of Chorlton from Acton.
Give your answer correct to 1 decimal place.
You must show all your working.

.....°

(Total for Question 6 is 5 marks)

Summer 2020 Paper 2 Q13

7 Here is triangle *ABC*.



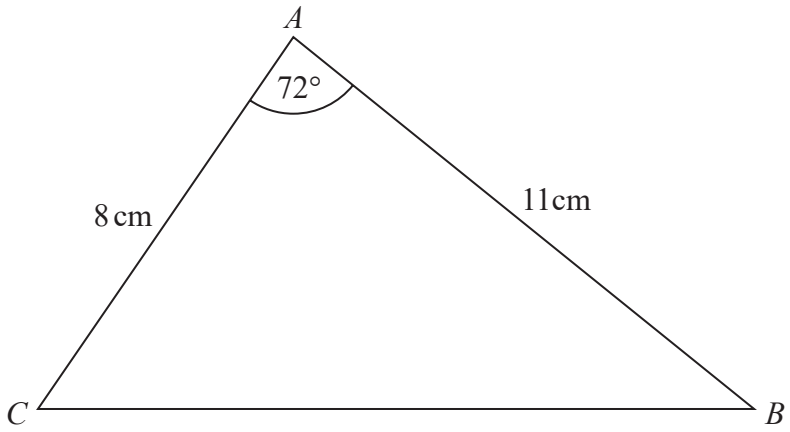
Work out the length of *AB*.
Give your answer correct to 1 decimal place.

..... cm

(Total for Question 7 is 3 marks)

Summer 2021 Paper 2 Q15

8 Here is triangle *ABC*.



(a) Find the length of *BC*.
Give your answer correct to 3 significant figures.

..... cm

(3)

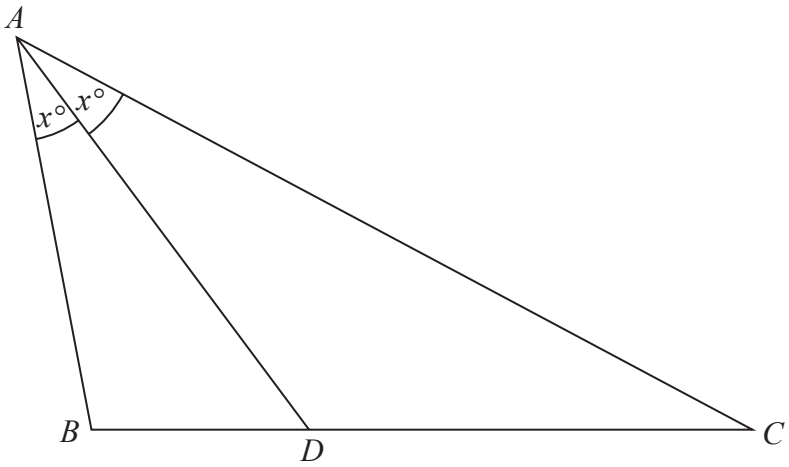
(b) Find the area of triangle *ABC*.
Give your answer correct to 3 significant figures.

..... cm^2

(2)

(Total for Question 8 is 5 marks)

9 ABC is a triangle.



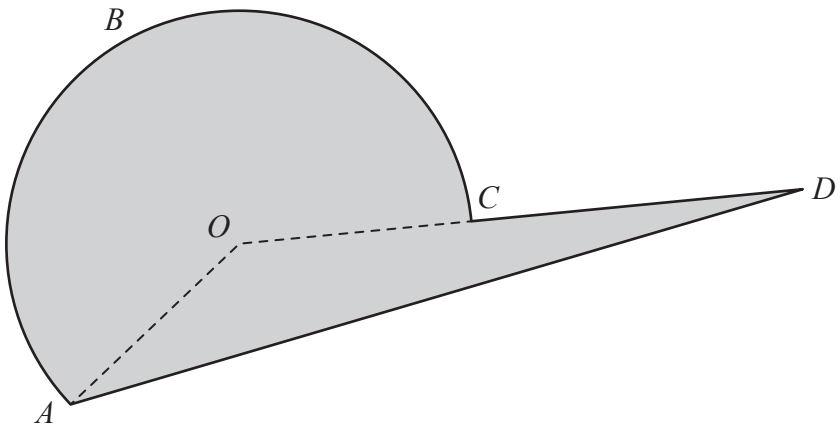
D is the point on BC such that angle BAD = angle DAC = $x°$

Prove that $\frac{AB}{BD} = \frac{AC}{DC}$

(Total for Question 9 is 4 marks)

Autumn 2018 Paper 3 Q16

10 Here is a shaded shape *ABCD*.



The shape is made from a triangle and a sector of a circle, centre *O* and radius 6 cm.
OCD is a straight line.

AD = 14 cm
Angle *AOD* = 140°
Angle *OAD* = 24°

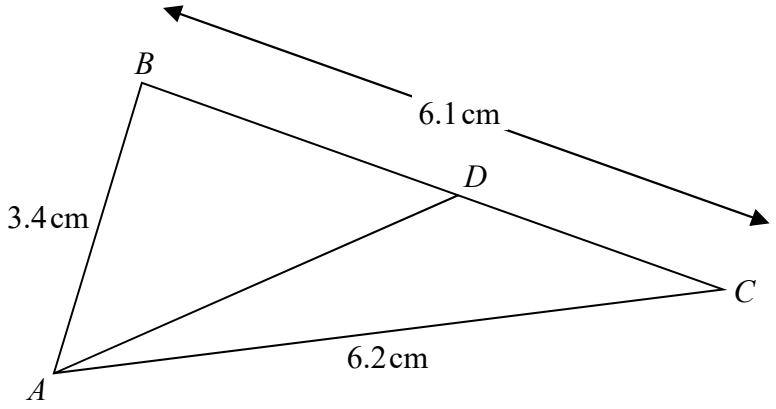
Calculate the perimeter of the shape.
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 10 is 5 marks)

Autumn 2019 Paper 3 Q18

11 The diagram shows triangle ABC.



$AB = 3.4\,\text{cm}$ $AC = 6.2\,\text{cm}$ $BC = 6.1\,\text{cm}$

D is the point on BC such that

$$\text{size of angle } DAC = \frac{2}{5} \times \text{ size of angle } BCA$$

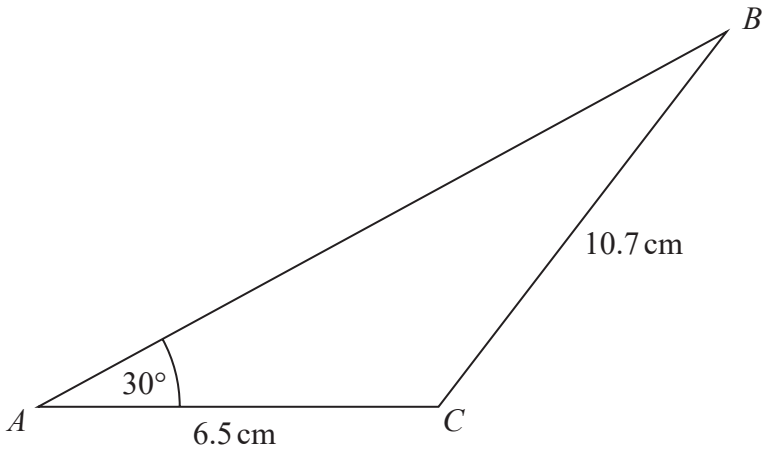
Calculate the length DC.
Give your answer correct to 3 significant figures.
You must show all your working.

..... cm

(Total for Question 11 is 5 marks)

Autumn 2022 Paper 1 Q22

12 Here is a triangle ABC.



Work out the value of $\sin ABC$

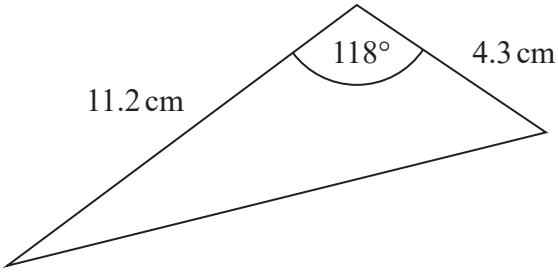
Give your answer in the form $\frac{m}{n}$ where m and n are integers.

.....

(Total for Question 12 is 4 marks)

Autumn 2022 Paper 2 Q18

13 Here is a triangle.



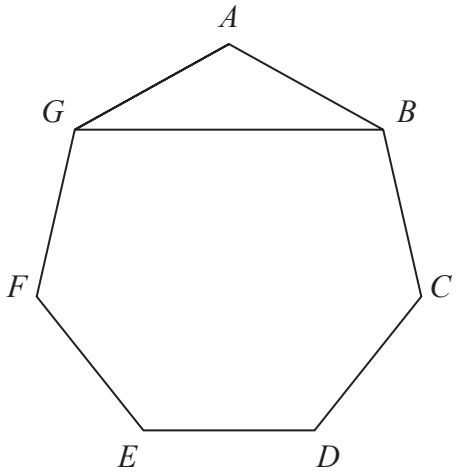
Work out the area of the triangle.
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 13 is 2 marks)

Autumn 2022 Paper 3 Q26

14 *ABCDEFG* is a regular heptagon.



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

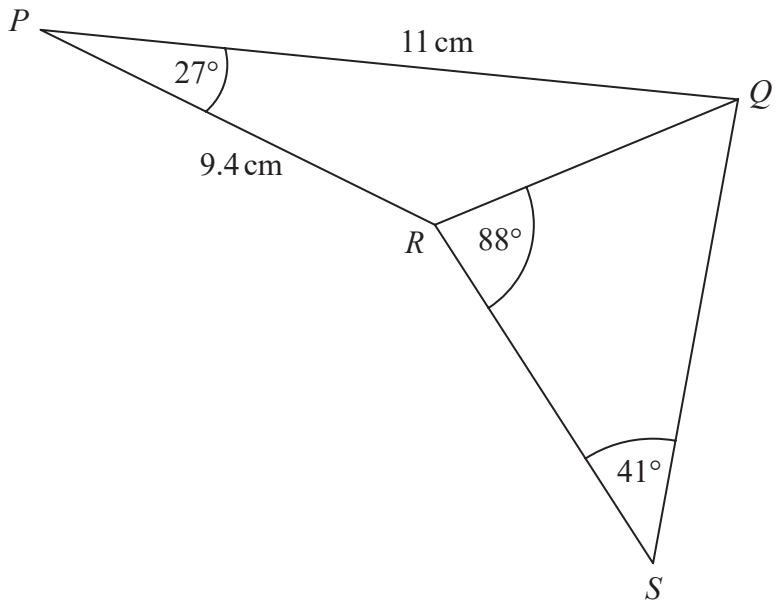
Calculate the length of *GB*.
Give your answer correct to 3 significant figures.
You must show all your working.

..... cm

(Total for Question 14 is 5 marks)

Summer 2022 Paper 2 Q18

15 *PQR* and *QRS* are triangles.



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

..... cm

(Total for Question 15 is 4 marks)