1. **[3 marks]**

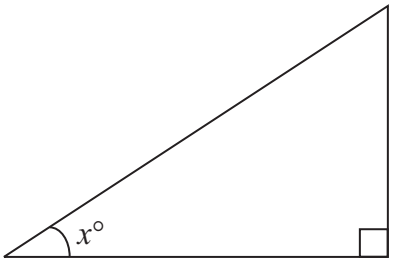

Diagram **NOT** accurately drawn

Work out the value of x.
Give your value correct to 1 decimal place.

x = ...

2. **[3 marks]**

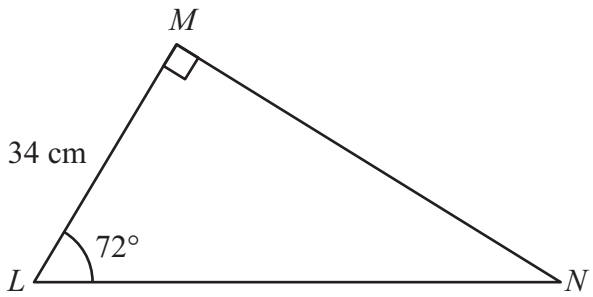

Diagram **NOT** accurately drawn

Calculate the length of MN.
Give your answer correct to 3 significant figures.

..... cm

3. **[6 marks]**

(a) The diagram shows triangle PQR.
$PQ = 4$ cm.
$PR = 8$ cm.
Angle $PQR = 90^o$.

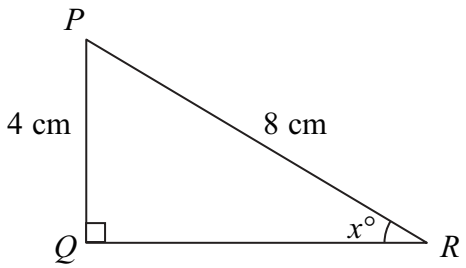

Diagram **NOT** accurately drawn

Calculate the value of x.

$x =$ .....

(3)

(b) The diagram shows triangle LMN.
$MN = 12$ cm.
Angle $LMN = 32^o$.
Angle $MLN = 90^o$.

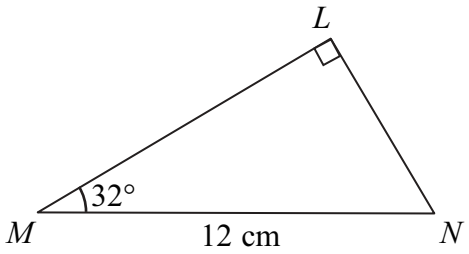

Diagram **NOT** accurately drawn

Calculate the length of ML.
Give your answer correct to 3 significant figures.

..... cm

(3)

4. **[6 marks]**

(a)

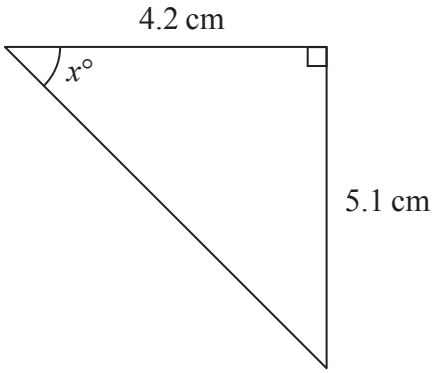

Diagram **NOT** accurately drawn

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

x = ...

(3)

(b)

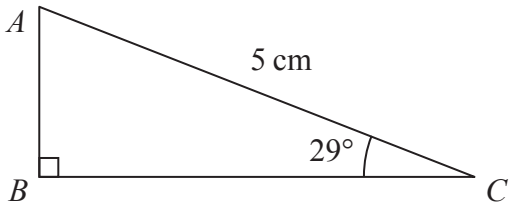

Diagram **NOT** accurately drawn

Calculate the length of AB.
Give your answer correct to 3 significant figures.

..... cm

(3)

5. **[3 marks]**

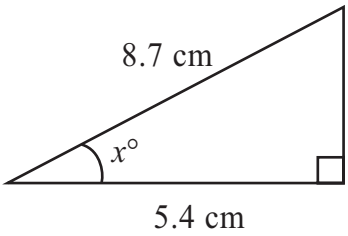

Diagram **NOT** accurately drawn

Work out the value of x.
Give your answer correct to 1 decimal place.

x = ...

6. **[3 marks]**

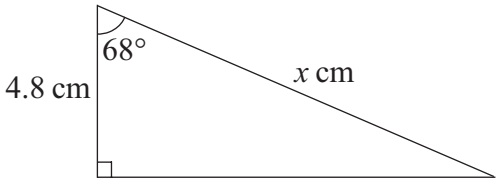

Diagram **NOT** accurately drawn

Calculate the value of x.

x = ...

7. **[3 marks]**

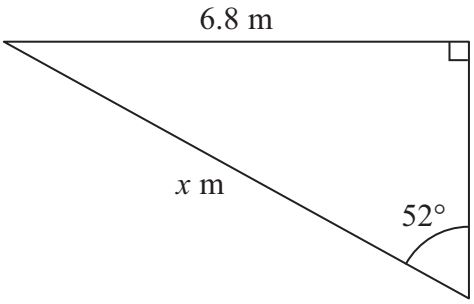

Diagram **NOT** accurately drawn

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

x = ...

8. **[3 marks]**

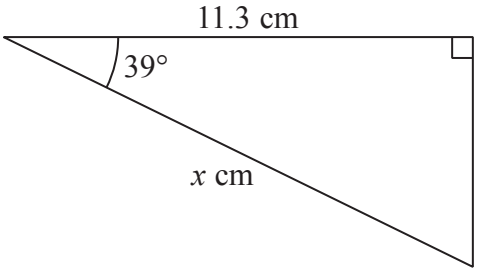

Diagram **NOT** accurately drawn

Work out the value of x.
Give your answer correct to 2 decimal places.

x = ...

9. **[4 marks]**

ABCD is a trapezium.

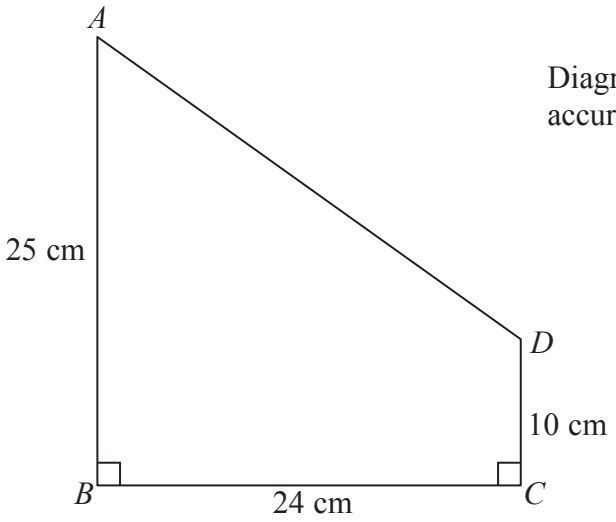

Diagram **NOT** accurately drawn

AB = 25 cm.
BC = 24 cm.
CD = 10 cm.

Angle *ABC* = angle *BCD* = 90°

Calculate the size of angle *CDA*.
Give your answer correct to 3 significant figures.

.....°

10. **[6 marks]**

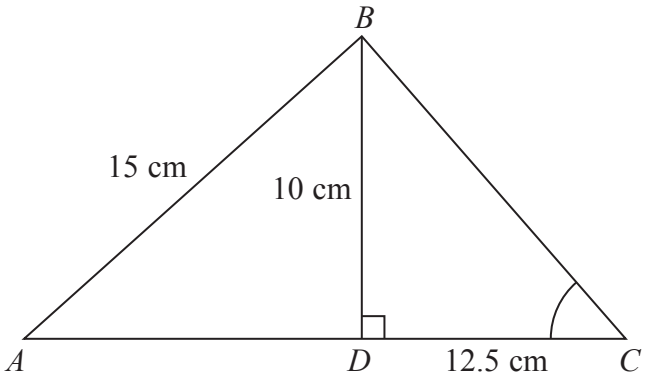

Diagram **NOT** accurately drawn

ABC is a triangle.
The point *D* lies on *AC*.
Angle *BDC* = 90°
BD = 10 cm, *AB* = 15 cm and *DC* = 12.5 cm.

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

..... cm

(3)

(b) Calculate the size of angle *BCD*.
Give your answer correct to 1 decimal place.

..... °

(3)

11. **[4 marks]**

Here is a triangle *QRS*.

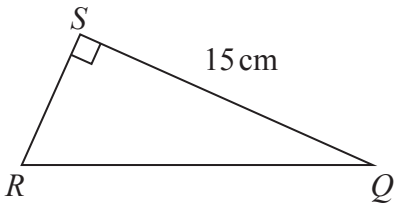

Diagram **NOT** accurately drawn

SQ = 15 cm
Angle *RSQ* = 90°
Area of triangle *QRS* = 60 cm^2

Work out the size of angle *SQR*.
Give your answer correct to 1 decimal place.

.....°

12. **[7 marks]**

The diagram shows a circle, centre O.
PTQ is the tangent to the circle at T.
$PO = 6$ cm.
Angle $OPT = 40°$.

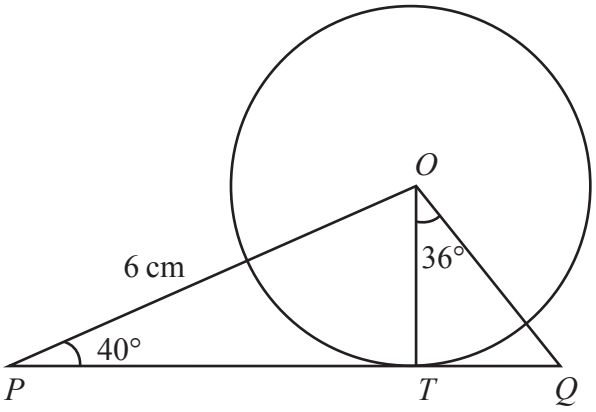

Diagram **NOT** accurately drawn

(a) Explain why angle $OTP = 90°$.

.....

.....

(1)

(b) Calculate the length of OT.
Give your answer correct to 3 significant figures.

..... cm
(3)

(c) Angle $QOT = 36°$.
Calculate the length of OQ.
Give your answer correct to 3 significant figures.

..... cm
(3)

13. **[4 marks]**

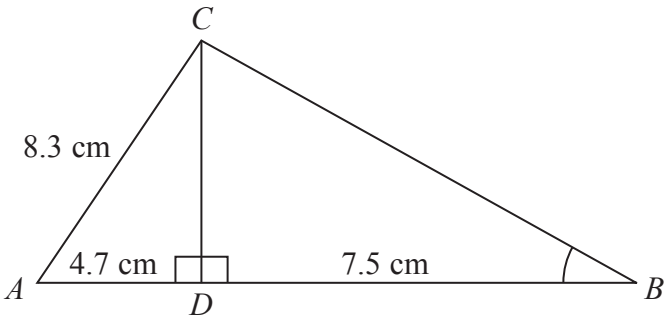

Diagram **NOT** accurately drawn

The diagram shows triangle *ABC*.
D is the point on *AB*, such that *CD* is perpendicular to *AB*.
AC = 8.3 cm.
AD = 4.7 cm.
BD = 7.5 cm.

Calculate the size of angle *ABC*.
Give your answer correct to 1 decimal place.

.....°

14. **[5 marks]**

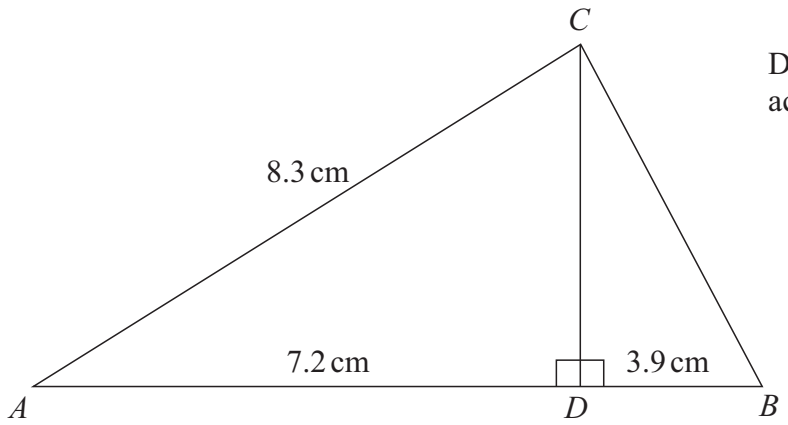

Diagram **NOT** accurately drawn

ABC is a triangle.
D is a point on *AB*.
CD is perpendicular to *AB*.
AD = 7.2 cm, *DB* = 3.9 cm, *AC* = 8.3 cm.

Calculate the size of angle *DBC*.
Give your answer correct to 1 decimal place.

..... °

15. **[4 marks]**

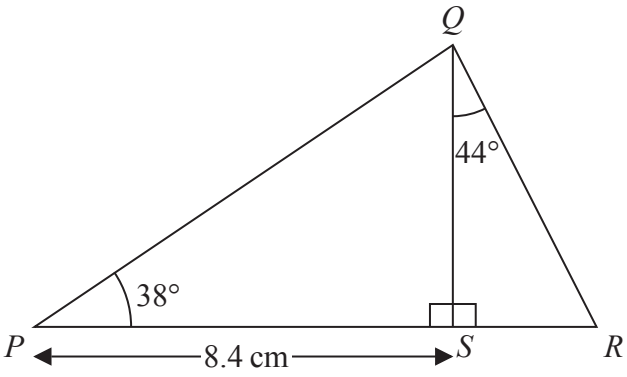

Diagram **NOT** accurately drawn

PSR is a straight line.

Angle *PSQ* = 90°
PS = 8.4 cm
Angle *QPS* = 38°
Angle *SQR* = 44°

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

..... cm

16. **[5 marks]**

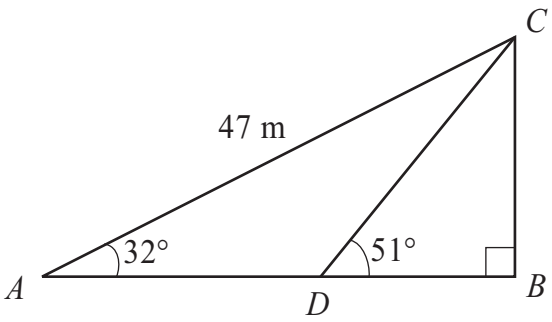

Diagram **NOT** accurately drawn

Triangle ABC is right-angled at B.
Angle $BAC = 32°$
$AC = 47$ m.
D is the point on AB such that angle $BDC = 51°$

Calculate the length of BD.
Give your answer correct to 3 significant figures.

..... m

17. **[4 marks]**

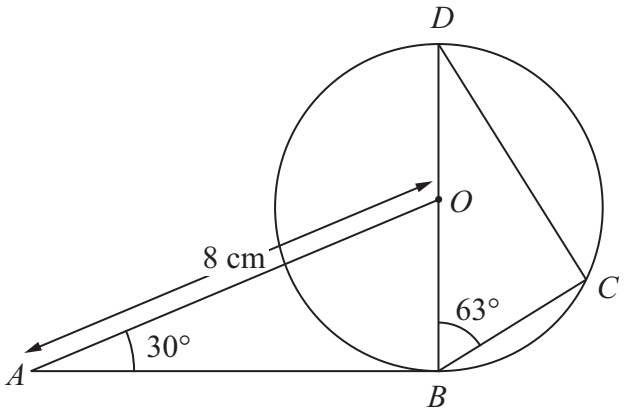

Diagram **NOT** accurately drawn

B, *C* and *D* are points on a circle, centre *O*.
BOD is a diameter of the circle.
AB is the tangent to the circle at *B*.
AO = 8 cm. Angle *BAO* = 30° Angle *CBD* = 63°

Calculate the length of *BC*.
Give your answer correct to 3 significant figures.

..... cm