Chapter 1

GCSE Questions - Right-Angled Triangles

1. ABC is an isosceles triangle.

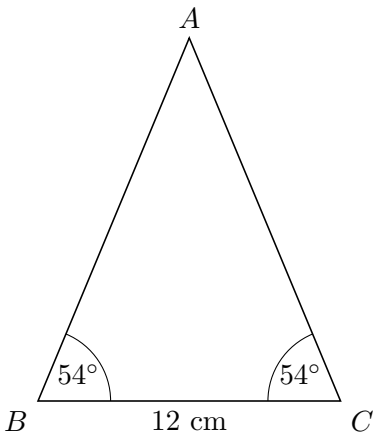

Diagram **NOT** accurately drawn

Work out the area of the triangle. Give your answer correct to 3 significant figures. **(4)**

.....cm^2

2. Here is a right-angled triangle.

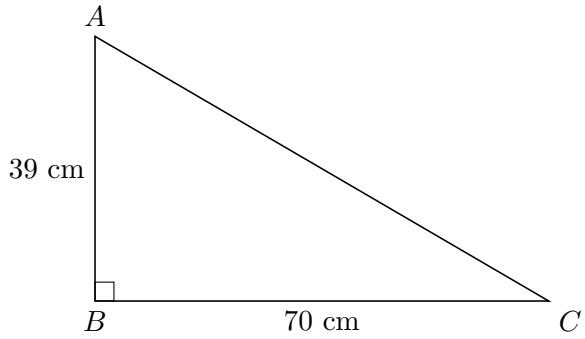

Diagram **NOT** accurately drawn

Work out the length of AC. Give your answer correct to 1 decimal place. **(3)**

.....cm

3.

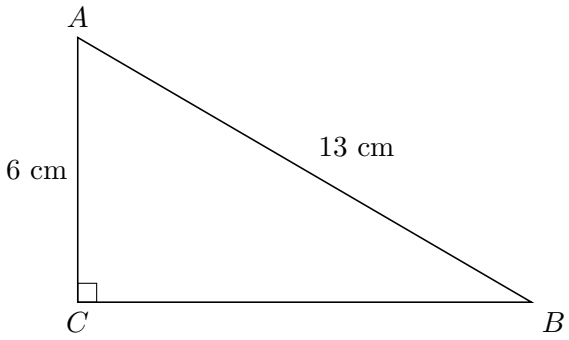

Diagram **NOT** accurately drawn

ABC is a right-angled triangle.

$AC = 6$ cm

$AB = 13$ cm

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

.....cm

(b)

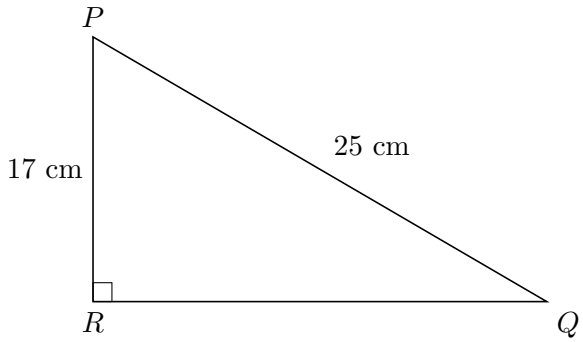

Diagram **NOT** accurately drawn

PQR is a right-angled triangle.

$R = 17$ cm

$PQ = 25$ cm

Work out the size of angle RPQ. Give your answer correct to 1 decimal place. **(3)**

.....°

4. The diagram shows a ladder leaning against a vertical wall.

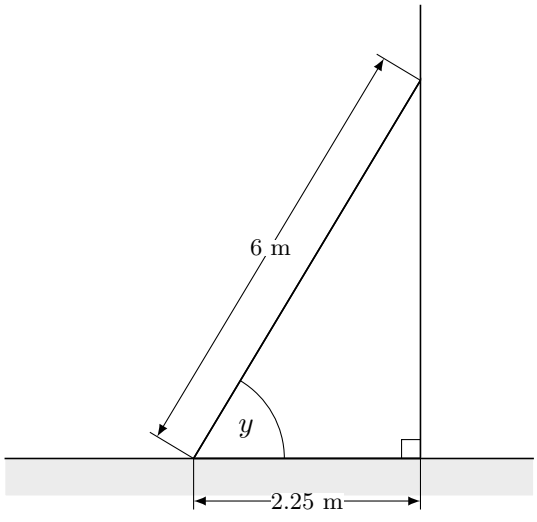

Diagram **NOT** accurately drawn

The ladder stands on horizontal ground. The length of the ladder is 6 m. The bottom of the ladder is 2.25 m from the bottom of the wall. A ladder is safe to use when the angle marked y is about 75°.

Is the ladder safe to use? You must show all your working. **(4)**

5. XYZ is a right-angled triangle.

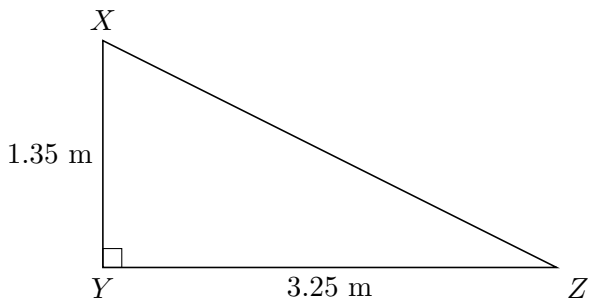

Diagram **NOT** accurately drawn

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

.....m

6.

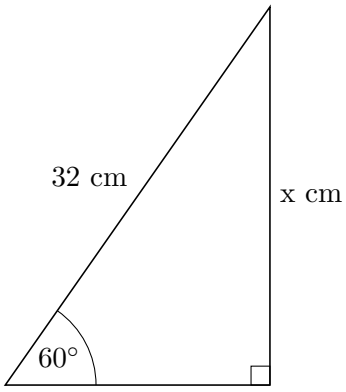

Diagram **NOT** accurately drawn

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

.....

7. $ABCD$ is a trapezium

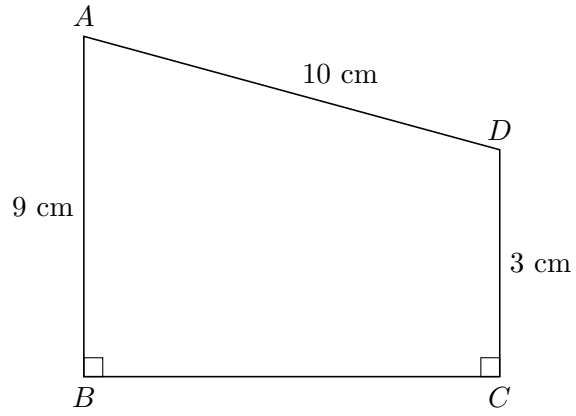

Diagram **NOT** accurately drawn

$AD = 10$ cm

$AB = 9$ cm

$DC = 3$ cm

Angle ABC = angle $BCD = 90°$ Calculate the length of AC. Give your answer correct to 3 significant figures. **(5)**

.....cm

8. (a) PQR is a right-angled triangle.

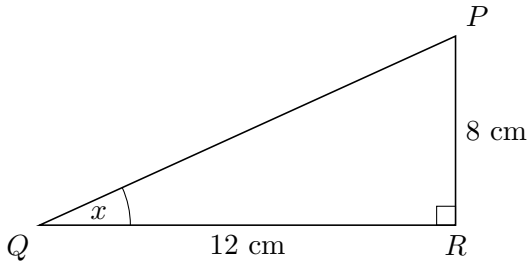

Diagram **NOT** accurately drawn

$PR = 8$ cm.

$QR = 12$ cm Find the size of the angle marked x. Give your answer correct to 1 decimal place. **(3)**

.....°

(b) XYZ is a different right-angled triangle.

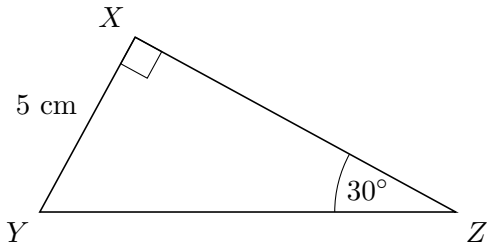

Diagram **NOT** accurately drawn

$XY = 5$ cm. Angle $Z = 32°$.

Calculate the length YZ. Give your answer correct to 3 significant figures. **(3)**

.....cm

9.

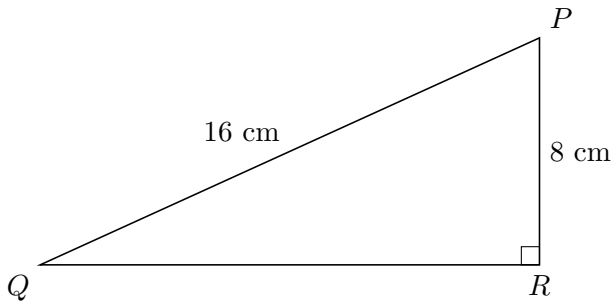

Diagram **NOT** accurately drawn

PQR is a right-angled triangle.

$PQ = 16$ cm. $PR = 8$ cm.

Calculate the length of QR. Give your answer correct to 2 decimal places. **(3)**

.....cm

10. The diagram shows a quadrilateral $ABCD$.

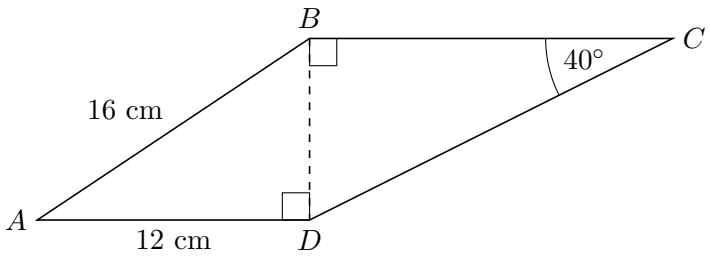

Diagram **NOT** accurately drawn

$AB = 16$ cm. $AD = 12$ cm. Angle $BCD = 40°$. Angle $ADB =$angle $CBD = 90°$.

Calculate the length of CD. Give your answer correct to 3 significant figures. **(5)**

.....cm

11.

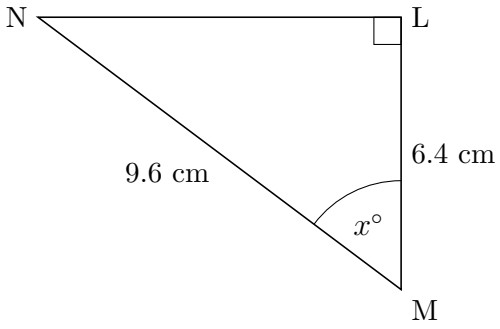

Diagram **NOT** accurately drawn

LMN is a right-angled triangle. $MN = 9.6$ cm. $LM = 6.4$ cm.

Calculate the size of the angle marked $x°$. Give your answer correct to 1 decimal place.

(3)

.....cm

12. The diagrams show a right-angled triangle and a rectangle

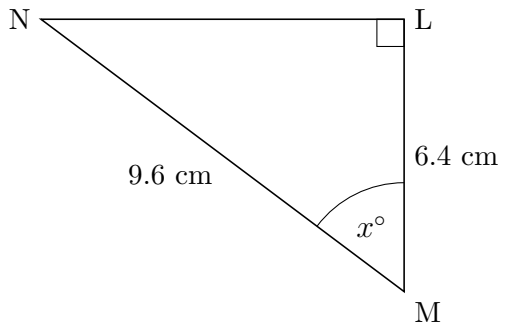

Diagram **NOT** accurately drawn