



EXAM PAPERS PRACTICE

GCSE OCR Math J560
SOHCAHTOA

Question Paper

*"We will help you to
achieve A Star "*



Question 1

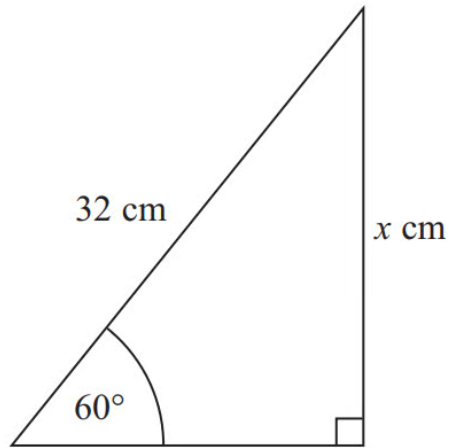


Diagram **NOT** accurately drawn

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

[3 marks]

Question 2

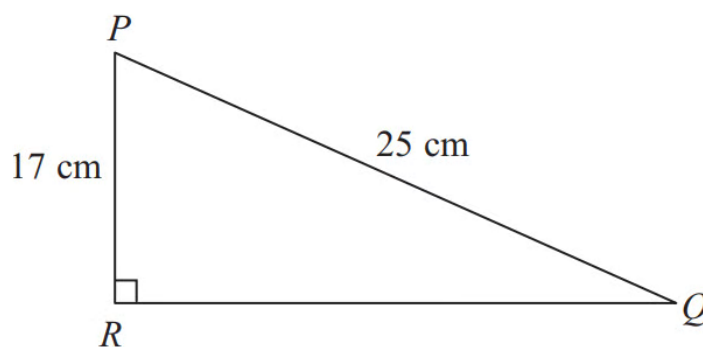


Diagram **NOT** accurately drawn

PQR is a right-angled triangle.
 $PR = 17$ cm
 $PQ = 25$ cm

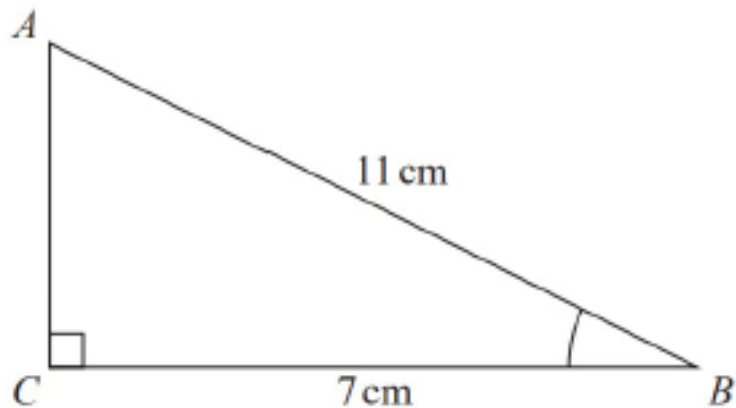
Work out the size of angle RPQ .
Give your answer correct to 1 decimal place.

[3 marks]



Question 3

ABC is a right-angled triangle.

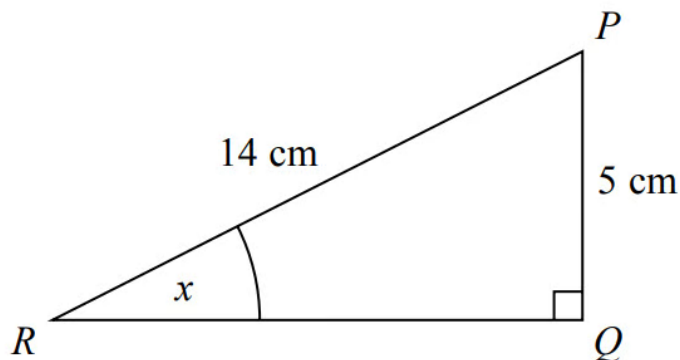


- (a) Work out the size of angle ABC .
Give your answer correct to 1 decimal place.

[2 marks]

Question 4

PQR is a right-angled triangle.



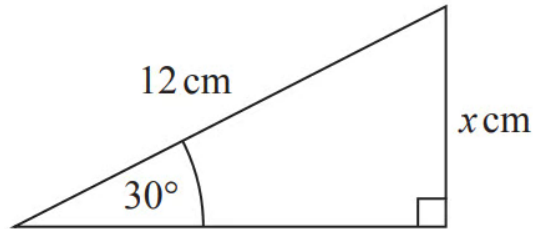
- Work out the size of the angle marked x .
Give your answer correct to 1 decimal place.

[2 marks]



Question 5

(b)

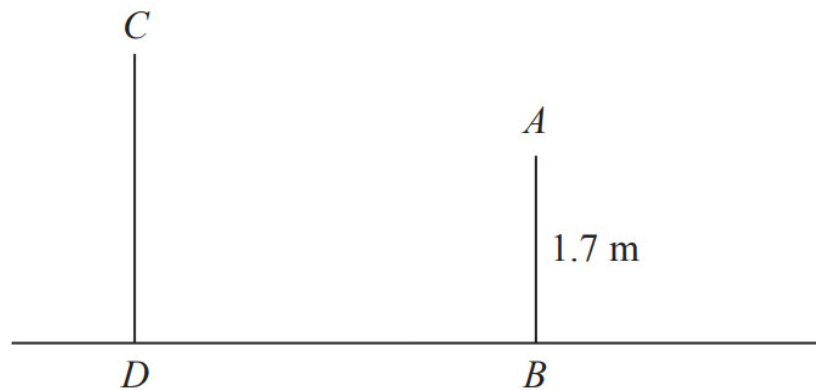


Given that $\sin 30^\circ = 0.5$,
work out the value of x .

[2 marks]

Question 6

The diagram shows two vertical posts, AB and CD , on horizontal ground.



$$AB = 1.7 \text{ m}$$

$$CD : AB = 1.5 : 1$$

The angle of elevation of C from A is 52°

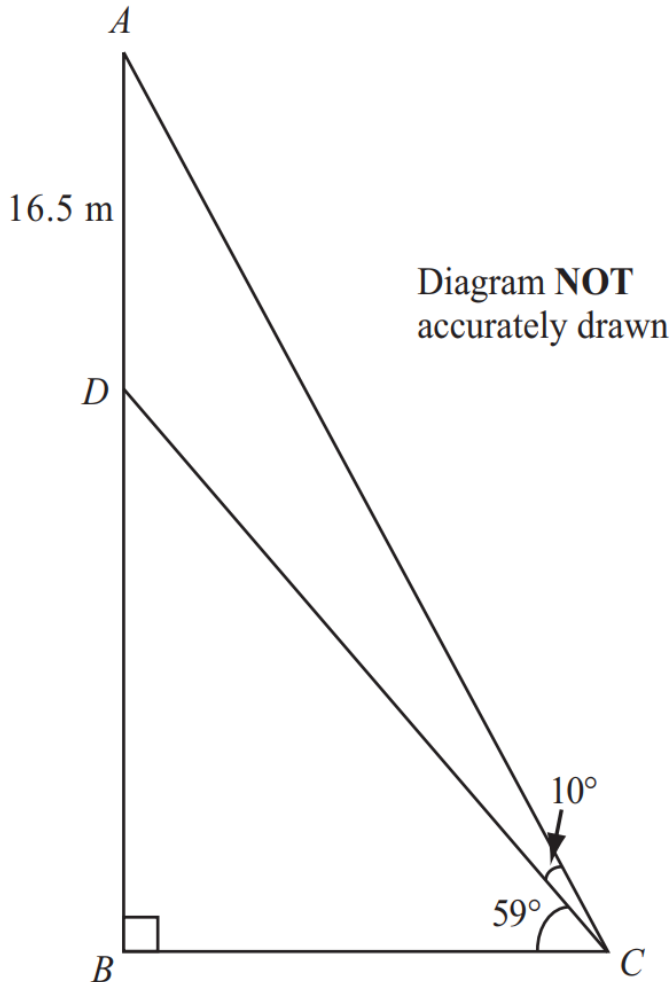
Calculate the length of BD .

Give your answer correct to 3 significant figures.

[4 marks]



Question 7



The diagram shows a vertical flagpole in Chennai, India.

The point A is at the top of the flagpole.

The point B is at the foot of the flagpole.

There is a platform at the point D on the flagpole.

B and C are points on horizontal ground.

$AD = 16.5$ m

The angle of elevation of A from C is 69°

The angle of elevation of D from C is 59°

Calculate the height, AB , of the flagpole.

Give your answer correct to 3 significant figures.

[6 marks]



Question 8

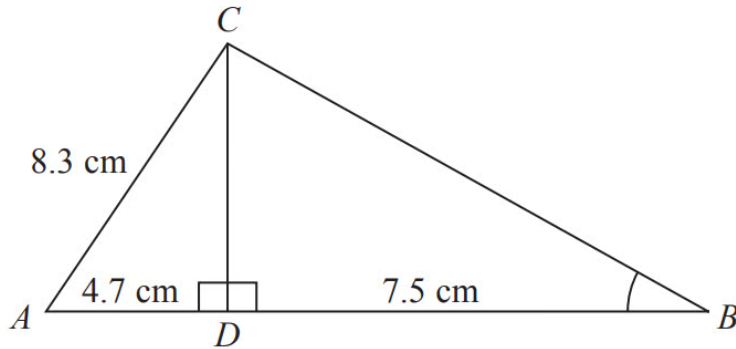


Diagram **NOT**
accurately drawn

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.

[4 marks]



Question 9

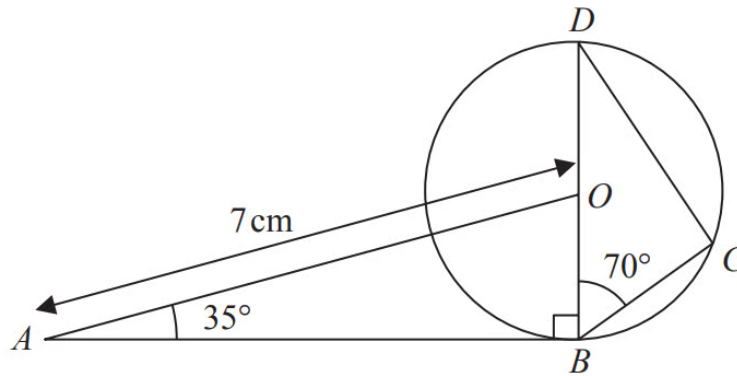


Diagram **NOT**
accurately drawn

B , C and D are points on the circumference of a circle, centre O .
 BOD is a diameter of the circle.

$AO = 7 \text{ cm}$ Angle $ABO = 90^\circ$ Angle $OAB = 35^\circ$ Angle $DBC = 70^\circ$

*(a) Explain why angle BCD is 90°

[1 mark]



Question 10

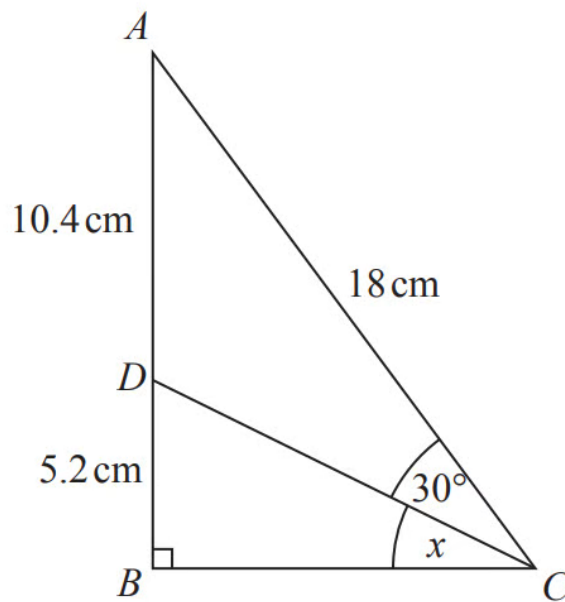


Diagram **NOT**
accurately drawn

ABC is a right-angled triangle.
 D is a point on AB .

Angle $ACD = 30^\circ$
 $AD = 10.4$ cm
 $DB = 5.2$ cm
 $AC = 18$ cm

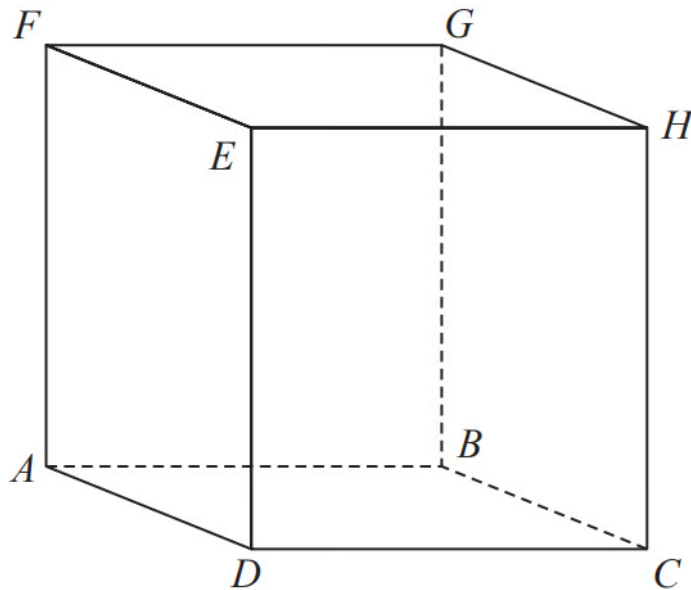
Work out the size of the angle marked x .
Give your answer correct to 1 decimal place.

[4 marks]



Question 11

$ABCDEFGH$ is a cuboid.



$$AB = 7.3 \text{ cm}$$

$$CH = 8.1 \text{ cm}$$

$$\text{Angle } BCA = 48^\circ$$

Find the size of the angle between AH and the plane $ABCD$.

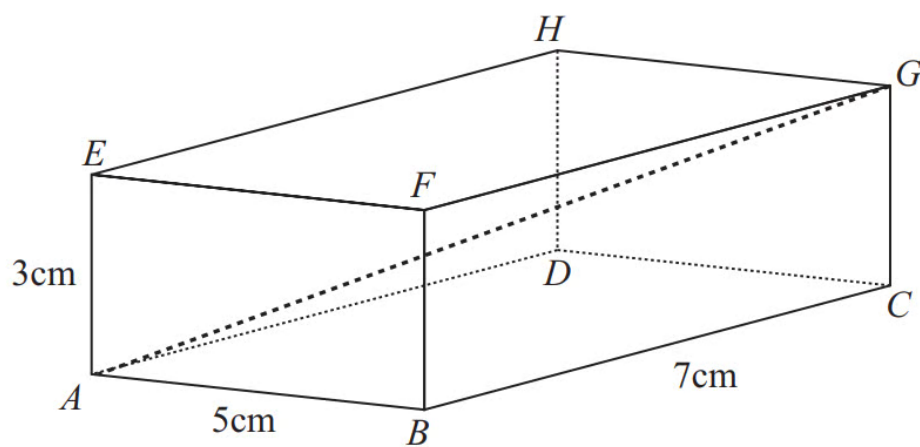
Give your answer correct to 1 decimal place.

[4 marks]



Question 12

Diagram **NOT**
accurately drawn



The diagram shows a cuboid $ABCDEFGH$.

$$AB = 5\text{cm}$$

$$BC = 7\text{cm}$$

$$AE = 3\text{cm}$$

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

[3 marks]



Question 13

The diagram shows a pyramid with a horizontal rectangular base $PQRS$.

$PQ = 16$ cm.

$QR = 10$ cm.

M is the midpoint of the line PR .

The vertex, T , is vertically above M .

$MT = 15$ cm.

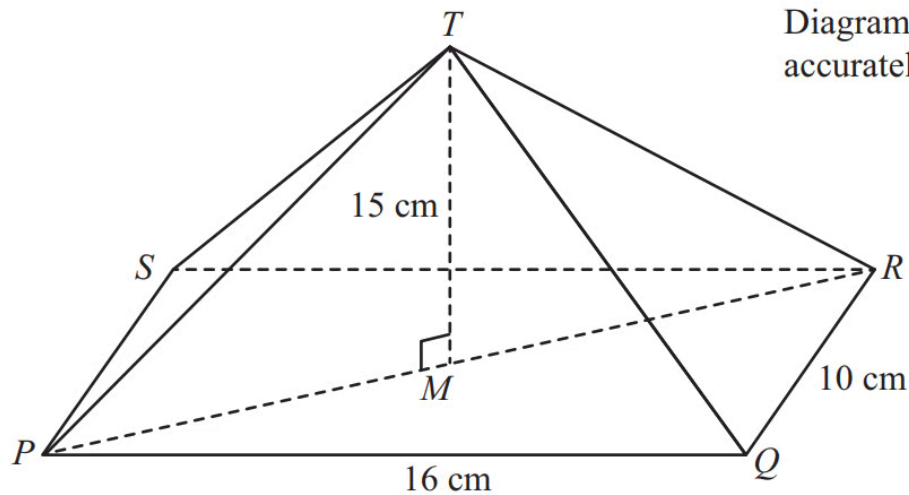


Diagram **NOT**
accurately drawn

Calculate the size of the angle between TP and the base $PQRS$.

Give your answer correct to 1 decimal place.

[4 marks]



Question 14

The diagram shows a triangular prism with a horizontal rectangular base $ABCD$.
 $AB = 10$ cm. $BC = 7$ cm.
 M is the midpoint of AD .
The vertex T is vertically above M .
 $MT = 6$ cm.

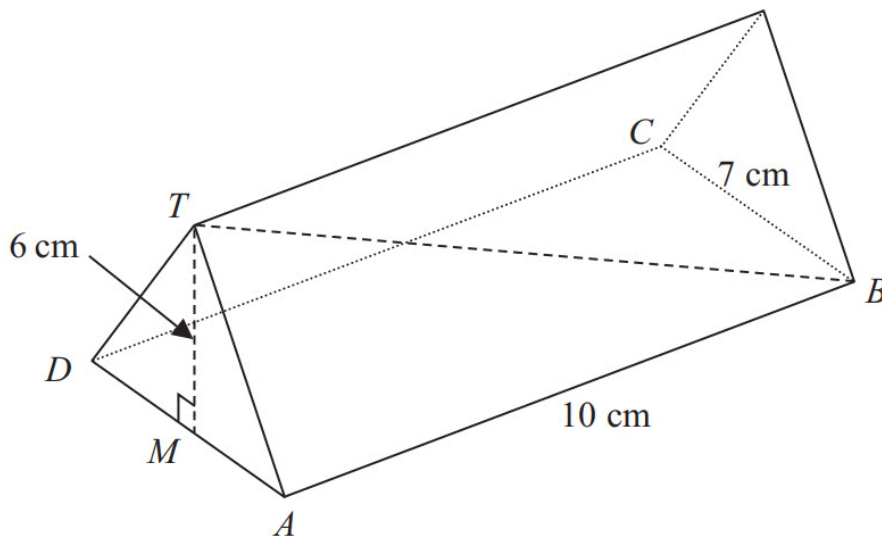


Diagram **NOT**
accurately drawn

Calculate the size of the angle between TB and the base $ABCD$.

Give your answer correct to 1 decimal place.

[4 marks]



Question 15

- (b) Find the size of the angle between the line FC and the plane $ABGF$.
Give your answer correct to 1 decimal place.

[2 marks]