

Delta 3 – Unit 9 Revision Questions

Q1.

The diagram shows a solid triangular prism.

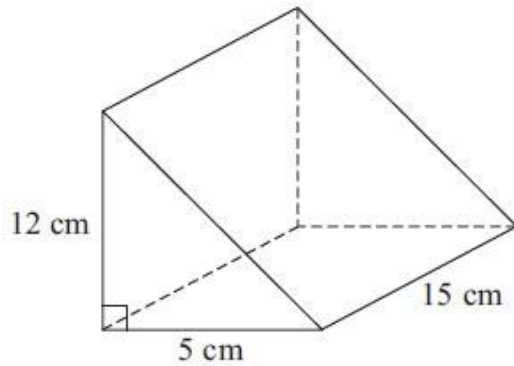


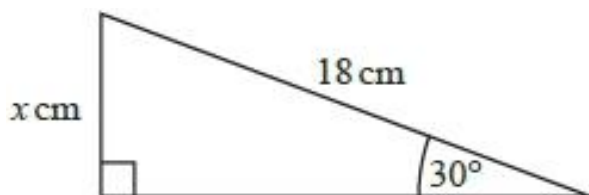
Diagram **NOT**
accurately drawn

The prism is made from metal.
The density of the metal is 6.6 grams per cm^3 .

Calculate the mass of the prism.

(Total for Question is 3 marks)

Q2.

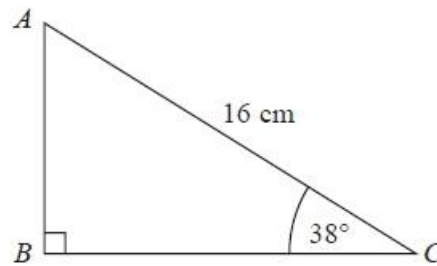


Work out the value of x .

(Total for question = 2 marks)

Q3.

ABC is a right-angled triangle.



Calculate the length of AB .
Give your answer correct to 2 decimal places.

..... cm

(Total for question = 2 marks)

Q4.

XYZ is a right-angled triangle.

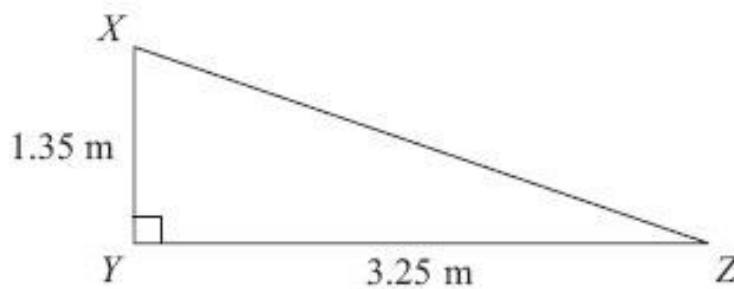


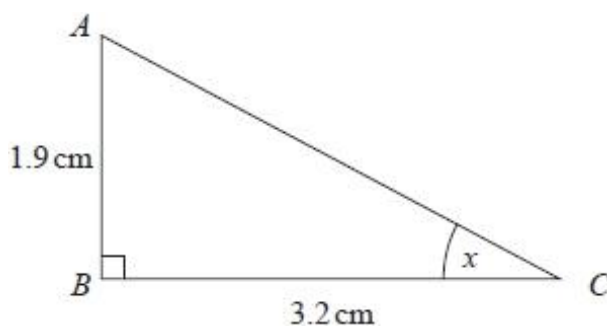
Diagram **NOT**
accurately drawn

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

(Total for Question is 3 marks)

Q5.

ABC is a right-angled triangle.



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

.....[°]

(Total for question = 2 marks)

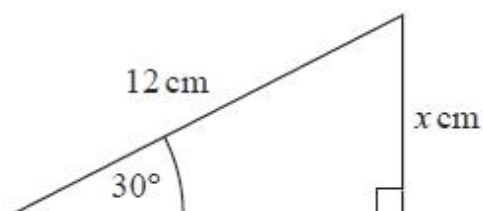
Q6.

(a) Write down the exact value of $\cos 30^\circ$

.....

(1)

(b)



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

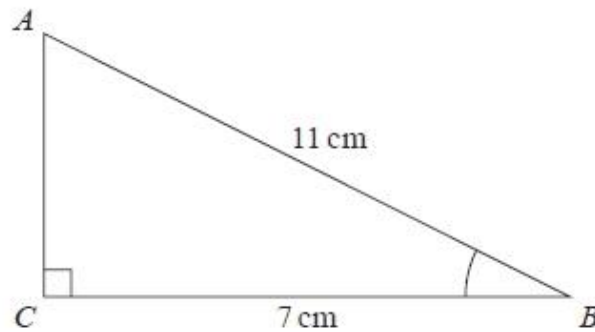
.....

(2)

(Total for question is 3 marks)

Q7.

ABC is a right-angled triangle.



(a) Work out the size of angle ABC .

Give your answer correct to 1 decimal place.

.....°
(2)

The length of the side AB is reduced by 1 cm .

The length of the side BC is still 7 cm .

Angle ACB is still 90°

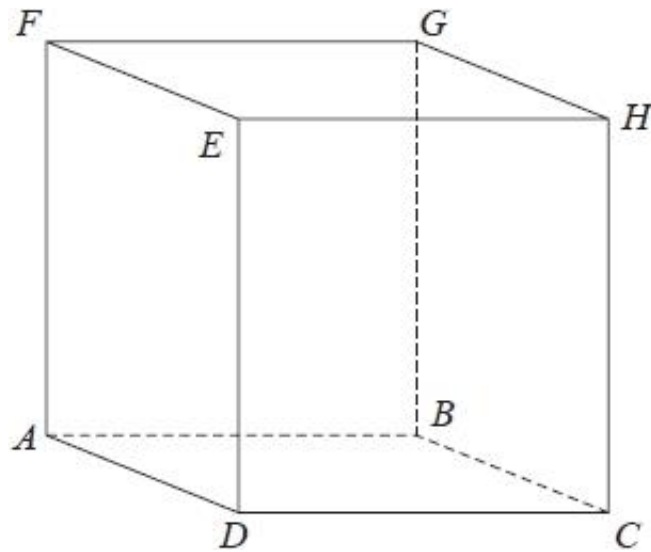
(b) Will the value of $\cos ABC$ increase or decrease?

You must give a reason for your answer.

(1)
(Total for question = 3 marks)

Q8.

$ABCDEFGH$ is a cuboid.



$AB = 7.3$ cm
 $CH = 8.1$ cm
Angle $BCA = 48^\circ$

Find the size of the angle between AH and the plane $ABCD$. Give your answer correct to 1 decimal place.

.....°

(Total for question = 4 marks)

Q9.

The diagram shows the positions of three turbines A , B and C .

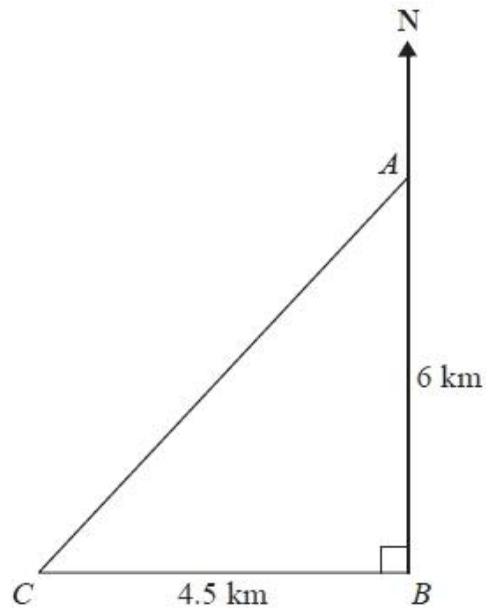


Diagram **NOT** accurately drawn

A is 6 km due north of turbine B .
 C is 4.5 km due west of turbine B .

(a) Calculate the distance AC .

..... km
(3)

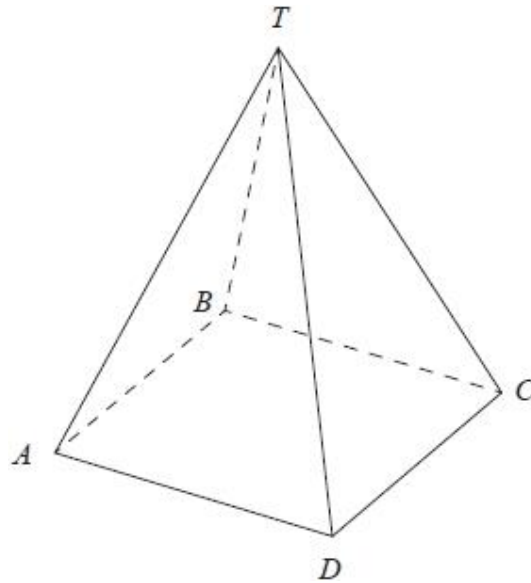
(b) Calculate the bearing of C from A .
Give your answer correct to the nearest degree.

.....°
(4)

(Total for Question is 7 marks)

Q10.

Here is a pyramid with a square base $ABCD$.



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

The vertex T is 12 m vertically above the midpoint of AC .

Calculate the size of angle TAC .

.....°

(Total for question = 4 marks)

Q11.

The diagram shows a ladder leaning against a vertical wall.

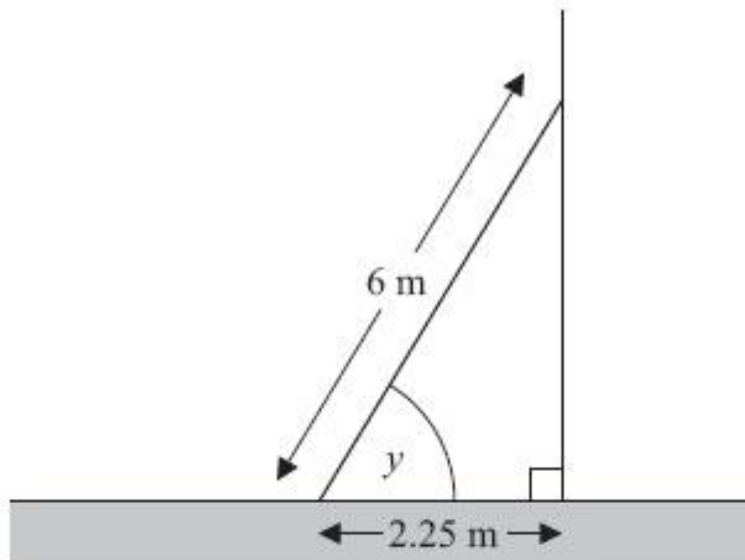


Diagram **NOT**
accurately drawn

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° .

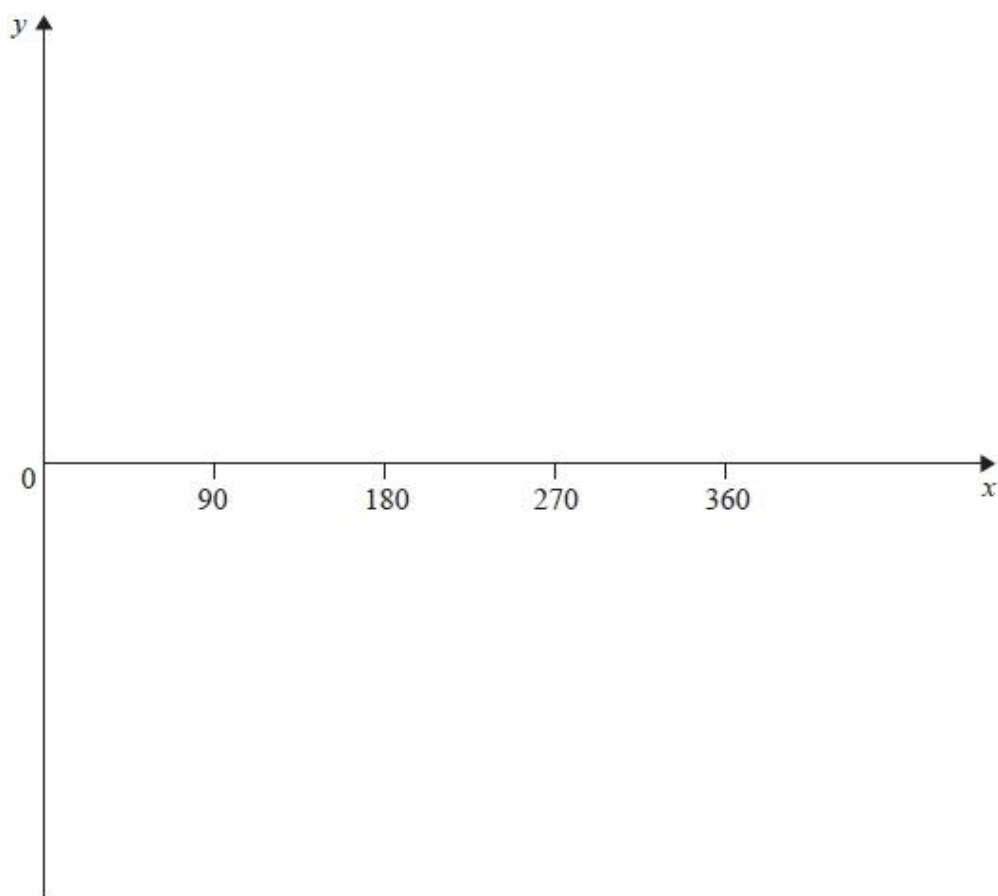
Is the ladder safe to use?

You must show all your working.

(Total for Question is 3 marks)

Q12.

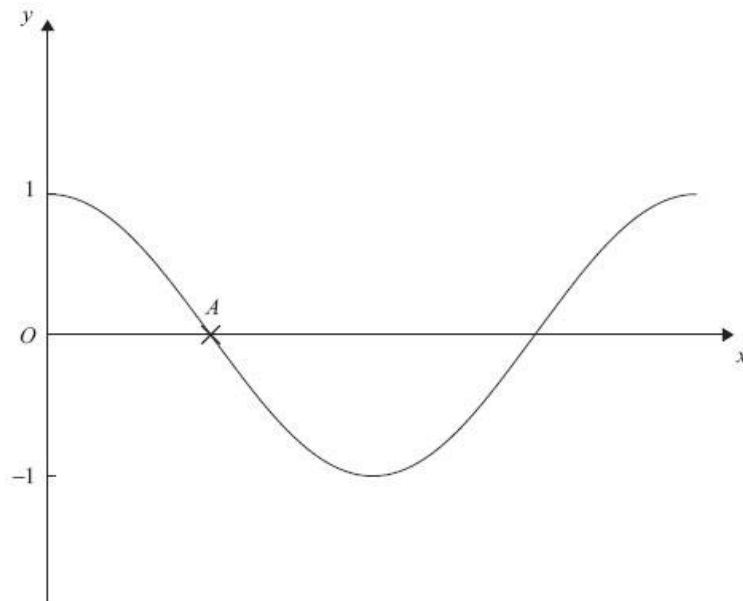
Sketch the graph of $y = \tan x^\circ$ for $0 \leq x \leq 360$



(Total for question = 2 marks)

Q13.

The diagram shows a sketch of the graph of $y = \cos x^\circ$

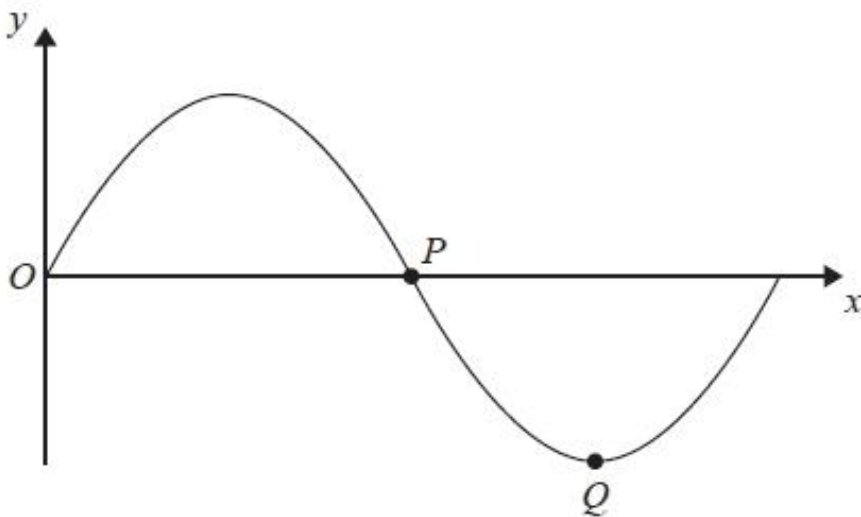


Write down the coordinates of the point A.

(Total for Question is 1 marks)

Q14.

The diagram shows part of a sketch of the curve $y = \sin x^\circ$.



(a) Write down the coordinates of the point P.

(..... ,)
(1)

(b) Write down the coordinates of the point Q.

(..... ,)
(1)

(Total for Question is 5 marks)