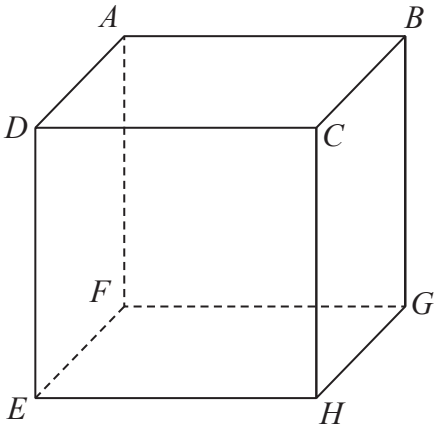
1 The diagram shows a cube.



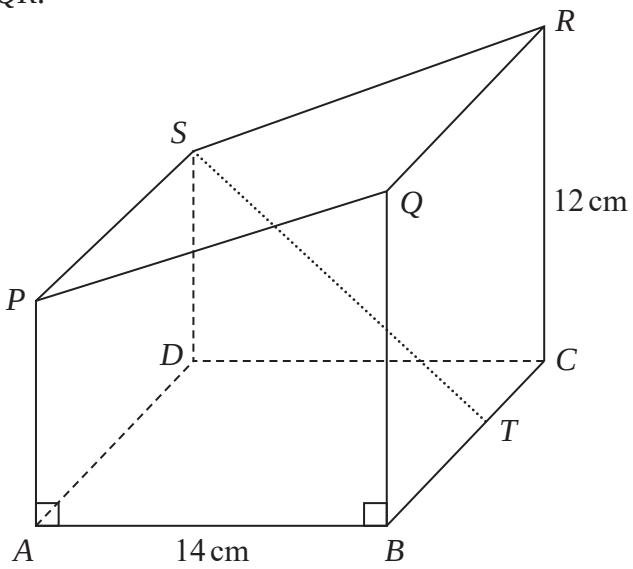
AH = 11.3 cm correct to the nearest mm.

Calculate the lower bound for the length of an edge of the cube.
You must show all your working.

..... cm

(Total for Question 1 is 4 marks)

2 Here is a prism *ABCDSPQR*.



The base *ABCD* of the prism is a square of side 14 cm
T is the point on *BC* such that *BT* : *TC* = 4 : 3

The cross section of the prism is in the shape of a trapezium of area 147 cm^2
CR = 12 cm

Find the size of the angle between the line *ST* and the base *ABCD*.
Give your answer correct to 1 decimal place.

.....°

(Total for Question 2 is 5 marks)