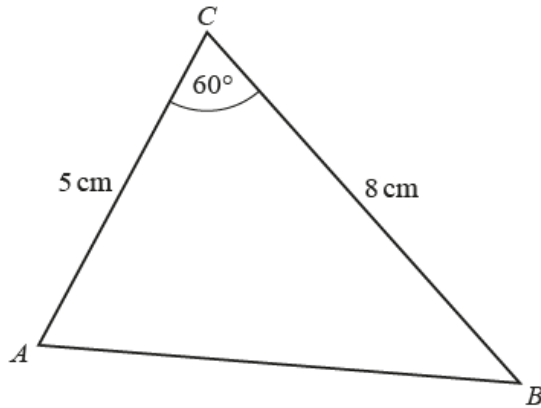




# 8.5 – Cosine rule and applications

Student name: \_\_\_\_\_ **Answers** \_\_\_\_\_ Score: \_\_\_\_\_

1.

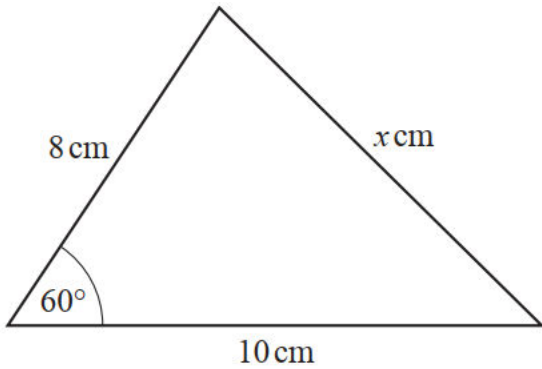


NOT TO SCALE

Find  $AB$ .

$AB = \dots\dots\dots 7 \dots\dots\dots$  cm [3]

2.



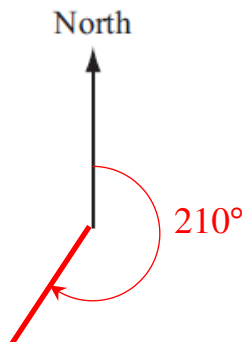
NOT TO SCALE

Find the value of  $x^2$ .

$x^2 = \dots\dots\dots 84 \dots\dots\dots$  [3]

3. The distance between towns  $A$  and  $B$  is 50 km.  
The bearing of  $A$  from  $B$  is  $210^\circ$ .

(a) Sketch the positions of  $A$  and  $B$  showing clearly the angle of  $210^\circ$ .



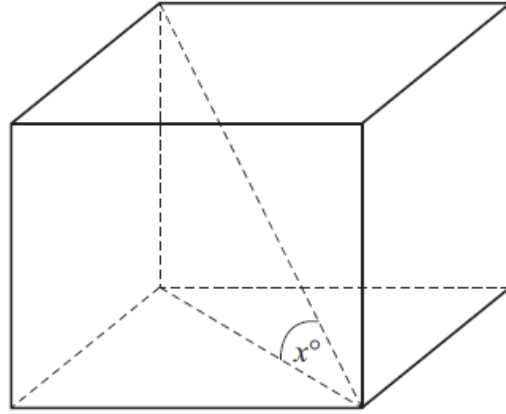
[1]

(b) Calculate how far west  $A$  is from  $B$ .

Answer(b)  $\dots\dots\dots 25 \dots\dots\dots$  km [2]



4.



NOT TO  
SCALE

The diagram shows a cube of side length 1.

Find the value of  $\tan x^\circ$ .

Answer .....  $\frac{\sqrt{2}}{2}$  ..... [3]

5. The bearing of point  $B$  from point  $A$  is  $234^\circ$ .

Work out the bearing of point  $A$  from point  $B$ .

..... 054 ..... [2]

6. The bearing of  $P$  from  $Q$  is  $110^\circ$ .

Find the bearing of  $Q$  from  $P$ .

..... 290 ..... [2]