16

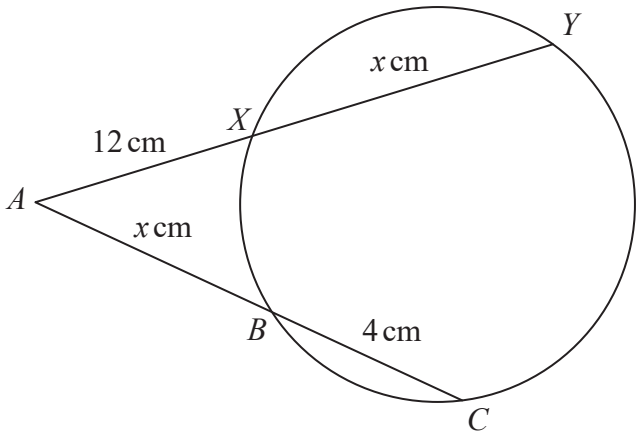


Diagram **NOT** accurately drawn

The points B, C, Y and X lie on a circle.

AXY and ABC are straight lines.

$AX = 12\,\text{cm}$ $XY = x\,\text{cm}$ $AB = x\,\text{cm}$ $BC = 4\,\text{cm}$

(a) Show that $x^2 - 8x - 144 = 0$

(3)

(b) Find the length of AC.
Show your working clearly.
Give your answer correct to 3 significant figures.

..... cm

(4)

(Total for Question 16 is 7 marks)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA