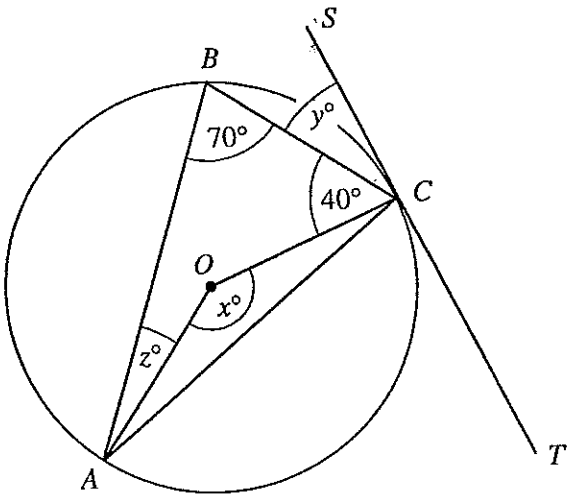
IGCSE – Circle Theorems – 6

Oct 01 Paper 2

9



NOT TO SCALE

Circle ABC has centre O. The line SCT is a tangent.
Angle $ABC = 70°$ and angle $OCB = 40°$.
Find x, y and z.

Answer $x =$ ..... [1]

$y =$ ..... [1]

$z =$ ..... [1]

May 02 Paper 4

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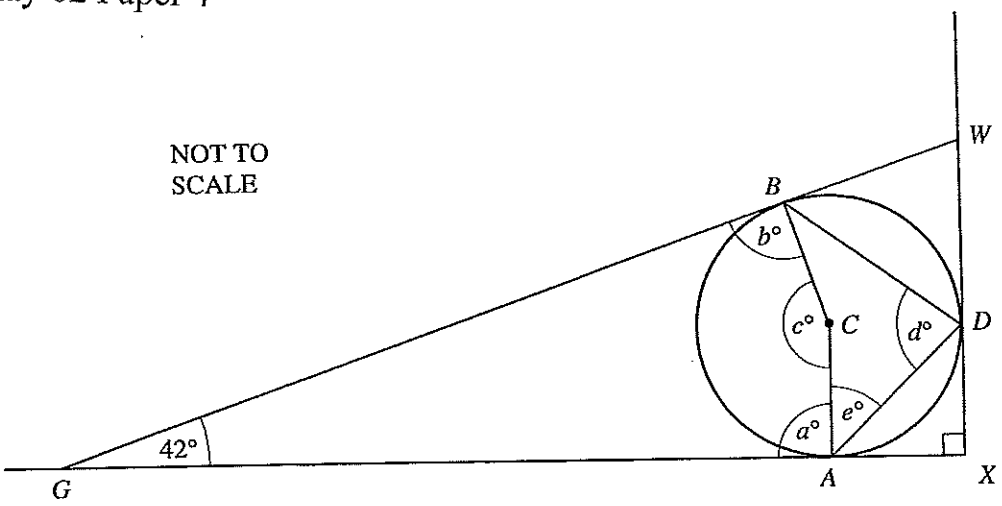

NOT TO SCALE

A sphere, centre C, rests on horizontal ground at A and touches a vertical wall at D.
A straight plank of wood, GBW, touches the sphere at B, rests on the ground at G and against the wall at W.
The wall and the ground meet at X.
Angle $WGX = 42°$.

(a) Find the values of a, b, c, d and e marked on the diagram. [5]

(b) Write down one word which completes the following sentence.

'Angle CGA is 21° because triangle GBC and triangle GAC are .....'. [1]

(c) The radius of the sphere is 54 cm.

(i) Calculate the distance GA. Show all your working. [3]

(ii) Show that $GX = 195$ cm correct to the nearest centimetre. [1]

(iii) Calculate the length of the plank GW. [3]

(iv) Find the distance BW. [1]