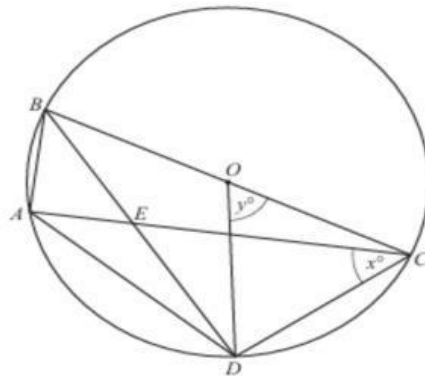


1. J20/22/9(b)



NOT TO
SCALE

A, B, C and D are points on the circumference of a circle, centre O .
 BD and AC intersect at E and BC is a diameter of the circle.
 $\angle ACD = x^\circ$ and $\angle DOC = y^\circ$.

Find an expression, in terms of x and/or y , for

(i) $\angle DBC$,

$\angle DBC = \dots\dots\dots$ [1]

(ii) $\angle ABD$,

$\angle ABD = \dots\dots\dots$ [1]

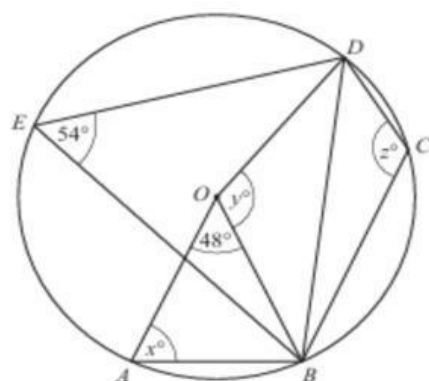
(iii) $\angle AED$,

$\angle AED = \dots\dots\dots$ [2]

(iv) $\angle BDA$,

$\angle BDA = \dots\dots\dots$ [1]

2. N20/12/22



NOT TO
SCALE

In the diagram, A , B , C , D and E lie on the circle, centre O .
 $\angle AOB = 48^\circ$, $\angle DEB = 54^\circ$.

(a) Find x .

$x = \dots\dots\dots$ [2]

(b) Find y .

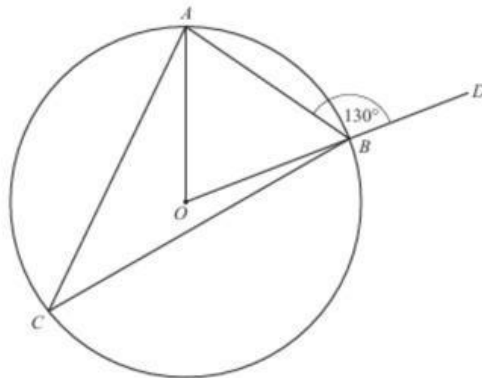
$y = \dots\dots\dots$ [1]

(c) Find z .

$z = \dots\dots\dots$ [1]

3. J21/22/10(a)

10 (a)



NOT TO
SCALE

A , B and C are points on the circumference of a circle, centre O .
 OBD is a straight line and angle $ABD = 130^\circ$.

Find angle ACB , giving a reason for each step of your working.

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Angle $ACB =$ [3]