Name:

Level 2 Further Maths

Circle Theorems

Corbettmaths

Ensure you have: Pencil or pen

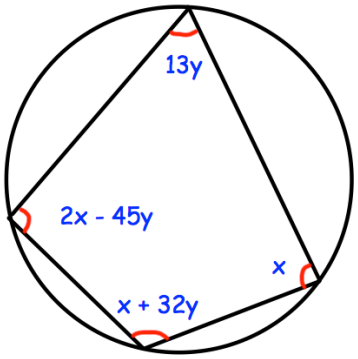
Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Revision for this topic

www.corbettmaths.com/more/further-maths/

1.

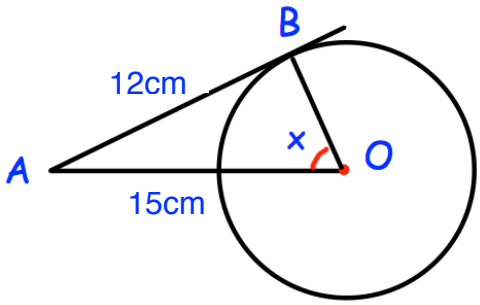


Find the values of x and y

$x =$ .....° $y =$ .....°

(3)

2.



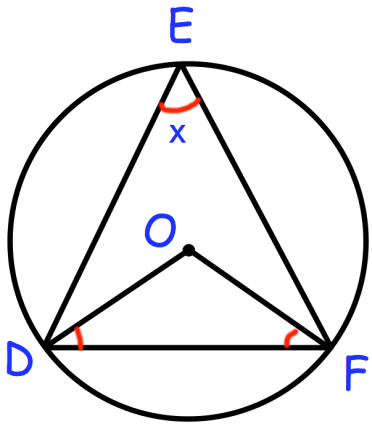
AB is a tangent to the circle.

Calculate the size of angle x.

$x =$ .....°

(3)

3.



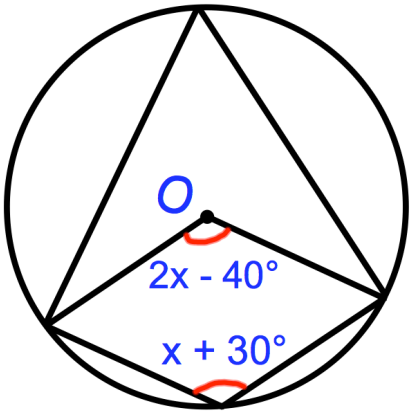
Given $\angle ODF = 2y - 10°$ and $\angle OFD = y + 22°$

Find $\angle DEF$

.....°

(3)

4.

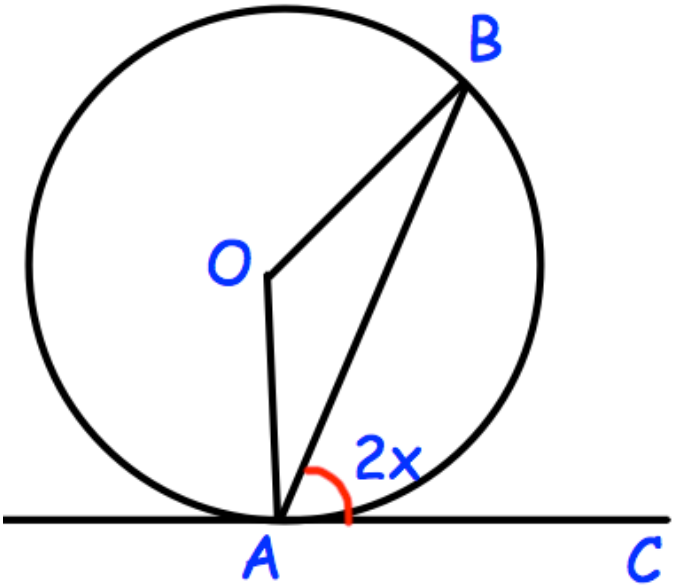


Work out the size of x

$x =$ .....°

(4)

5.

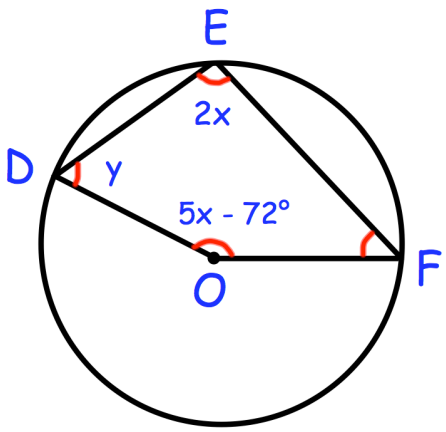


A and B are points on the circumference of a circle, centre O.
CA is a tangent to the circle.
Angle CAB = 2x

Prove that angle AOB = 4x
Give reasons for each stage of your working.

(4)

6.



The points D, E and F are points on a circle, centre O.

Angle DEF = $2x$ Angle DOF = $5x - 72°$ Angle EDO = y

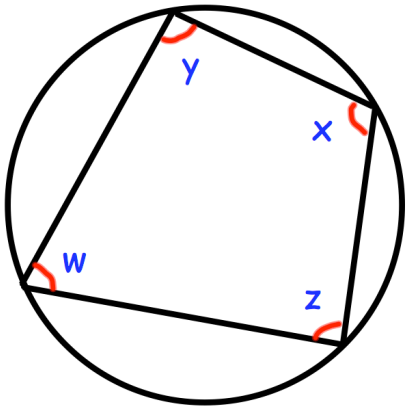
Angle EFO is 14° smaller than angle EDO

Work out the value of y

$y =$ .....°

(5)

7.



$w : x = 2 : 3$

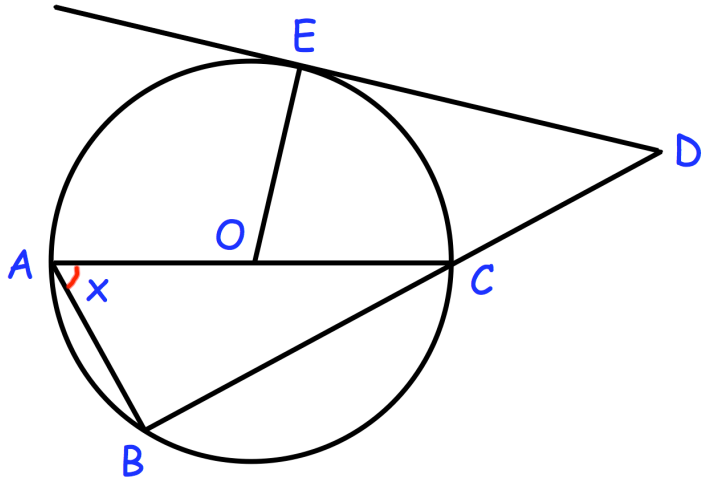
$x : y = 9 : 8$

Work out the size of angle z.

$z =$ .....°

(5)

8.



AC is the diameter of a circle, centre O.
DE is the tangent to the circle.
BCD is a straight line.
AO = CD

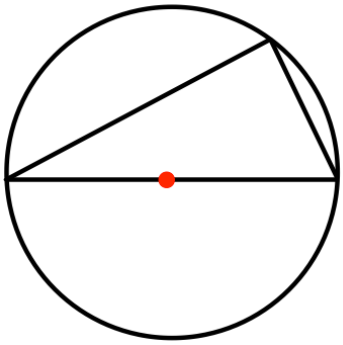
Angle BAC = x

Express angle COD in terms of x.

.....

(5)

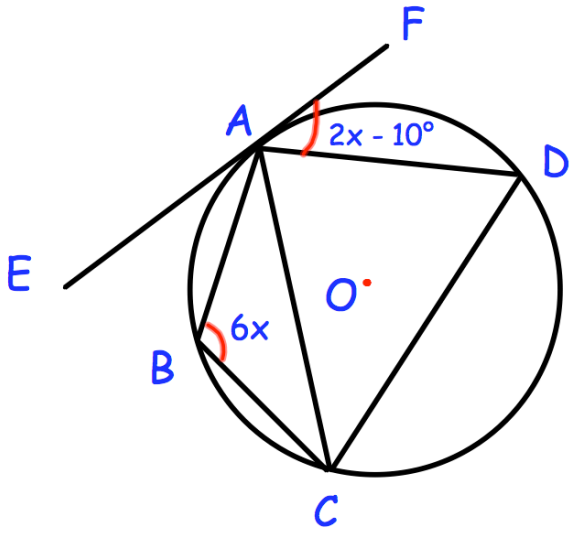
9.



Prove that the angle in a semi-circle is always 90°

(3)

10.



EF is a tangent to a circle, centre O.

$\angle DAF = 2x - 10°$

$\angle ABC = 6x$

AC = CD

Find the size of angle $\angle DAF$

.....

(4)