

Circles 2 – “Opposite angles in a cyclic quadrilateral add up to 180° ”

Applet: <http://www.waldomaths.com/Circle1NLW.jsp>

Questions (NB. None of these diagrams are to scale, so measuring angles won't help!
You may need to use other rules that you already know.)

- 1 In diagram A, the cyclic quadrilateral ABCF has been shaded. See how many more cyclic quadrilaterals you can find.
- 2 In diagram B calculate the angles marked x and y .

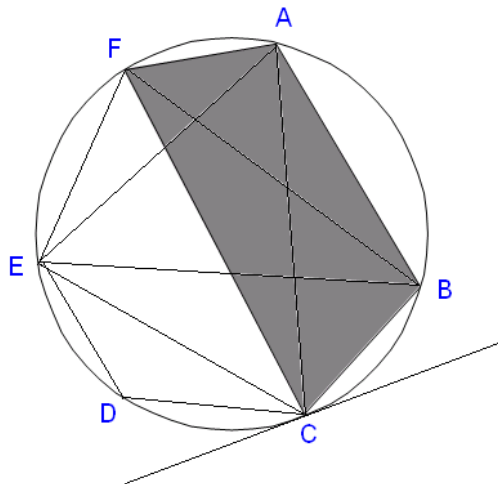


Diagram A

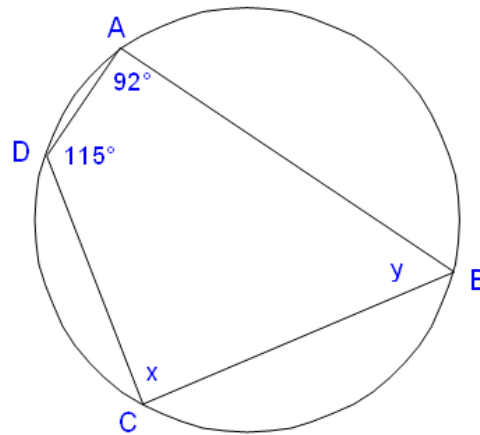


Diagram B

- 3 In diagram C calculate the angles w and z .
- 4* In diagram D calculate the angle v . [Take care! v is **not** in a cyclic quadrilateral. You have to work out some other angles first.]

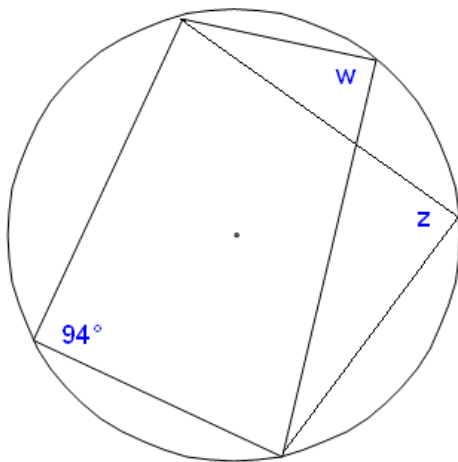


Diagram C

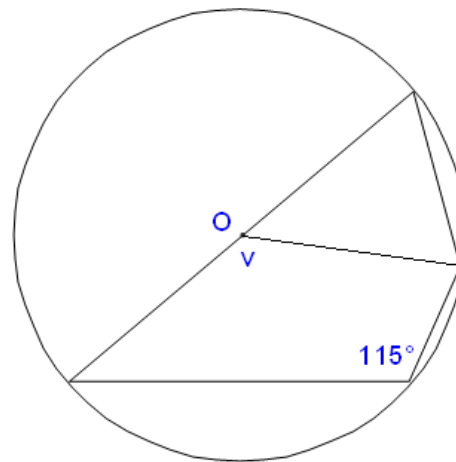


Diagram D

Answers:

- 1 6 (ABCF, ABEF, ACEF, BCDE, BCEF, CDEF)
 2 $x = 88^\circ$, $y = 65^\circ$ 3 $w = 86^\circ$, $z = 86^\circ$ 4* $v = 130^\circ$