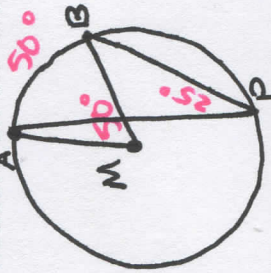


OBJECTIVE 1: Angles in Circles

Hopefully you watched the video posted to Google Classroom before now, otherwise take the two minutes and watch it, and then come back to the board to finish the tasks.

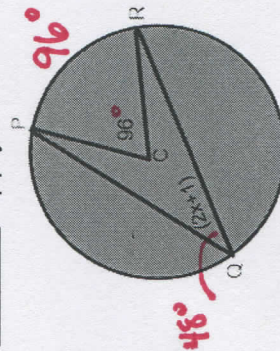
TASK 1:

Draw circle M with a central angle of 50° . It's intercepted arc is \widehat{AB} . Write its measure on the circle too. Finally, create an inscribed angle APB and write its angle measure in your circle too.

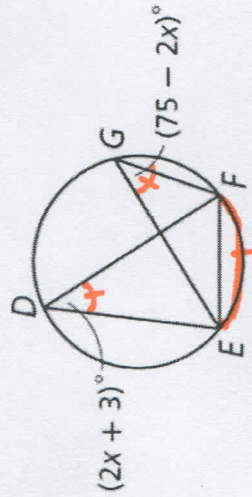


OBJECTIVE 2: Inscribed Angles of a Circle Theorem

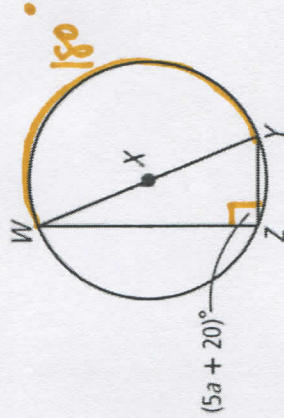
TASK 2: Apply the formula for inscribed angles to solve for the variable in all three examples below.



$2x + 1 = 48$
 $2x = 47$
 $x = 23.5$



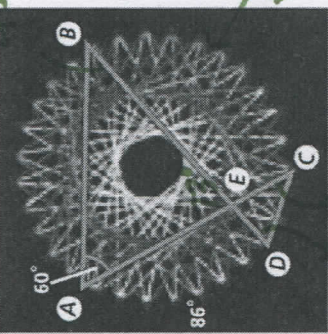
$2x + 3 = 75 - 2x$
 $4x = 72$
 $x = 18$



$5a + 20 = 90$
 $5a = 70$
 $a = 14$

TASK 3: Real World Application

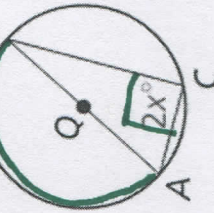
Identify all the inscribed angles in the string art. Find $m\angle ABD$ and $m\widehat{BC}$. Are there any other measures you can identify?



$\angle CAB; \angle ABD; \angle BDC; \angle DCA$
 $\frac{1}{2} \widehat{AD} = \frac{1}{2}(86)$
 $m\angle ABD = 43^\circ$
 $2(\widehat{BAC}) = 2(60)$
 $m\widehat{BC} = 120^\circ$

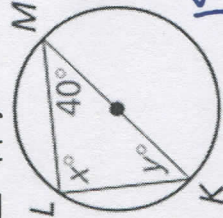
TASK 4: Inscribed Right Triangle Theorem

If a right triangle is inscribed in a circle, then the hypotenuse is a diameter of the circle.

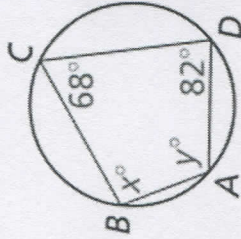


$2x = 90$
 $x = 45$

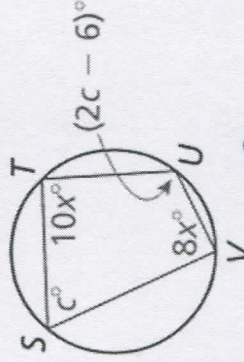
TASK 6: Apply the theorems above to solve for the variable in all three examples below.



$x = 90$
 inscribed \angle of diameter
 $180 - 40 - 90$
 $y = 50$



$y + 68 = 180$
 $y = 112$
 $x + 82 = 180$
 $x = 98$



$8x + 10x = 180$
 $18x = 180$
 $x = 10$

Still need help with:

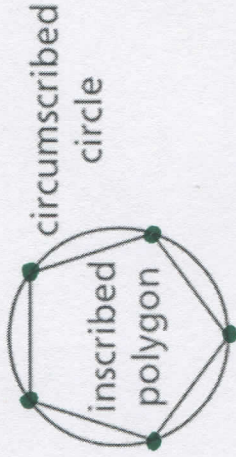
$x = 10$

$c + 2c - 6 = 180$
 $3c - 6 = 180$
 $3c = 186$
 $c = 62$

OBJECTIVE 3: Inscribed and Circumscribed Polygons

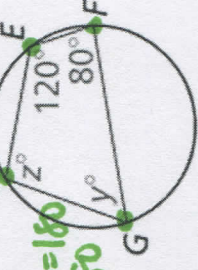
Polygons

A polygon is inscribed in a circle when all its vertices lie on the circle. A circle that contains all the vertices of a polygon means the circle circumscribed about that polygon.



TASK 5: Inscribed Quadrilateral Theorem

A quadrilateral can be inscribed in a circle iff its opposite angles are supplementary.



$m\angle D + m\angle F = 180$
 $120 + 80 = 180$
 $z = 100$

$m\angle E + m\angle G = 180$
 $120 + y = 180$
 $y = 60$