$\qquad$ Date $\qquad$
Day 2 - Inscribed Angles and Inscribed Quadrilaterals

| Name | Definition | Measure |
| :---: | :---: | :---: |
| Inscribed Angle | An angle whose vertex is <br> on a circle and whose <br> sides contain chords of <br> the circle | The measure of an <br> inscribed angle is half the <br> measure of its intercepted <br> arc. |
| Intercepted Arc | An arc whose endpoints <br> lie on the sides of an <br> inscribed angle and all <br> the points of the circle <br> between them. | The measure of an <br> intercepted arc is double <br> the measure of the <br> inscribed angle. |

Example: Find the measure of angle $A B D$.


Example: Find the measure of $\operatorname{arc} A B$ and $B C$.


Example: Find the value of $x$ and $\operatorname{arc} A B D$.


Example: Find the measure of angle BAC.


Example: Find the measure of angle JLM.


## Intercepted Arcs

| Name | Theorem | Hypothesis | Conclusion |
| :---: | :---: | :---: | :---: |
| Intercepted Arcs <br> Corollary | If inscribed angles of a <br> circle intercept the <br> same arc, then the <br> angles are congruent |  |  |

Example: Find the measure of angle B.


Example: Find the measure of angle G and arc IF.


## Inscribed Polygons

| Name | Theorem | Hypothesis |
| :---: | :---: | :---: |
| Inscribed Polygons | A polygon whose vertices <br> lie on the circle. | Opposite angles are <br> supplementary. |

Example: Find the value of $x$ and $y$.


Example: Can this quadrilateral be inscribed inside a circle?


