GEOMETRY · CLASSWORK · SPECIAL ED

Relate Inscribed Angles to Intercepted Arcs

SCORE / 25

01 Part A · Practice

The measure of an inscribed angle is half the measure of its intercepted arc.

EXAMPLE

Inscribed $\angle ACB$ intercepts $\overset{\frown}{AB}$, and $m\overset{\frown}{AB} = 110°$. Find $m\angle ACB$.

1. The vertex C is on the circle, so the angle is inscribed.

2. $m\angle ACB = \frac{1}{2}(110) = 55°$.

WORDS TO KNOW

inscribed angle	an angle with its vertex on the circle and sides that are chords
intercepted arc	the arc inside the angle
central angle	an angle with its vertex at the center

1 ●○○

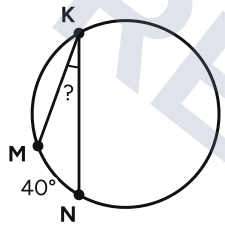
$m\overset{\frown}{AB} = 110°$. Points C and D are on the circle, not on $\overset{\frown}{AB}$. Find $m\angle ACB$ and $m\angle ADB$.

HINT Both angles intercept the same arc.

2 ●○○

$\angle MKN$ is inscribed in the circle and $m\overset{\frown}{MN} = 40°$. Find $m\angle MKN$.

HINT Inscribed angle = $\frac{1}{2}$ intercepted arc.



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Preview - the full worksheet and its answer key are at primeworksheet.com