Inscribed Angles

ID: 9687
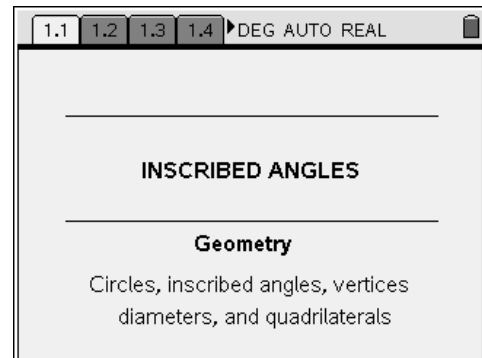
Name _____

Class _____

In this activity, you will explore:

- *Inscribed angles in circles*
- *Diameters and semi-circles*
- *Inscribed quadrilaterals*

Open the file *GeoAct27_InscribedAngles_EN.tns* on your handheld and follow along with your teacher to work through the activity. Use this document as a reference and to record your answers.

| 1.1 | 1.2 | 1.3 | 1.4 | ▶DEG AUTO REAL | 🔋 |

INSCRIBED ANGLES

Geometry

Circles, inscribed angles, vertices
diameters, and quadrilaterals

Problem 1 – Discover the rules

Go to page 1.2 and press PLAY to animate the open point.

- Make a conjecture.

On page 1.4, drag each open point around the circle.

- Make a conjecture.

On page 1.6, press PLAY to animate the open point.

- Make a conjecture. Explain why this makes sense.

On page 1.8, measure each angle of the quadrilateral and find the sum of the opposite angles.

- Make a conjecture. Explain why this makes sense.

Problem 2 – Use the rules

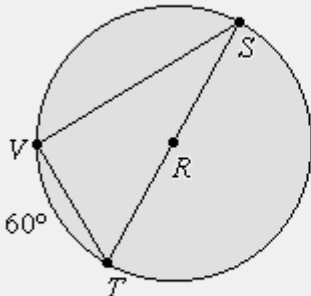Solve each problem on pages 2.2, 2.3, and 2.4 by hand.
Then, use tools from the Measurement menu to check your answers.

$m\angle VST =$ _____

$m\angle SVT =$ _____

$m\angle VTS =$ _____

| 1.8 | 1.9 | 2.1 | 2.2 | ▶DEG AUTO REAL
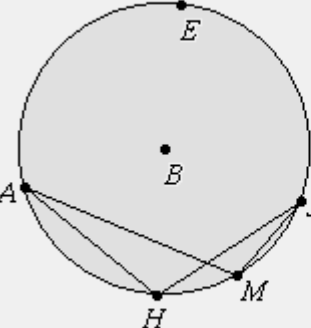
Circle R

Find $m\angle VST$.
Find $m\angle SVT$.
Find $m\angle VTS$.

60°

$m\angle AHJ =$ _____

$m\angle JMA =$ _____

| 1.9 | 2.1 | 2.2 | 2.3 | ▶DEG AUTO REAL

Circle B

measure of
arc AEJ = 216°
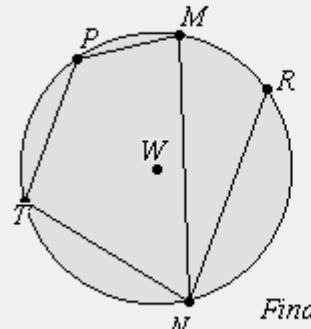
Find $m\angle AHJ$.
Find $m\angle JMA$.

$m\angle PMN =$ _____

$m\angle MNR =$ _____

$m\angle PTN =$ _____

| 2.1 | 2.2 | 2.3 | 2.4 | DEG AUTO REAL

Circle W

measure of
arc PTN = 157.5°

measure of
arc MR = 45°

Find $m\angle PMN$, $m\angle MNR$,
and $m\angle PTN$.