TOPIC 17-1: INSCRIBED ANGLES
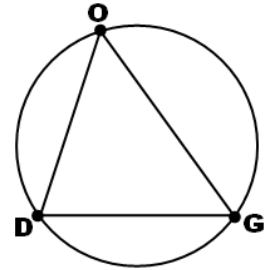
<u>Inscribed Angle</u> - An angle whose vertex is on the circle, and whose sides contain chords of the circle.

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EXAMPLE 1: **Name ALL of the inscribed angles and their corresponding intercepted arcs below.**

Inscribed angles/Intercepted Arc:

_____/_____

_____/_____

_____/_____

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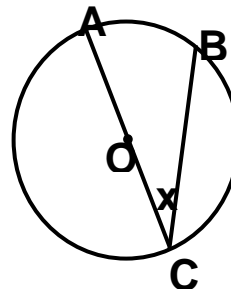
THEOREM: If an angle is inscribed in a circle, then the measure of the

angle is _____ the measure of the _____

_____.

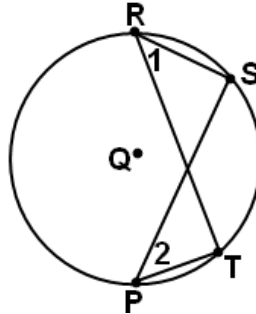**Given that m $\overarc{BC}$ = 100°, find the value of 'x' in circle O.**

X = _____

THEOREM: If two inscribed angles of a circle or congruent circles

intercept _____ _____ or the same arc, then the angles are

_____.

In circle Q, m⌢ST = 68°. Find the m∠1 and m∠2.

m∠1 = _____

m∠2 = _____

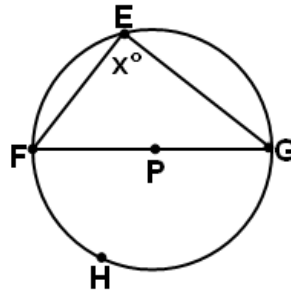- -

THEOREM: If an inscribed angle of a circle intercepts a semicircle,
            then the angle is a _____ _____.

Find the value of 'x'.

X = _____

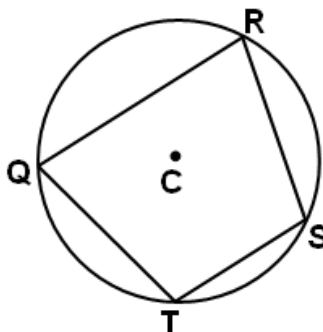- -

THEOREM: If a quadrilateral is inscribed in a circle, then its _____

            _____are supplementary.

**Quadrilateral QRST is inscribed in circle C. If
m∠T = 95° , m∠S = 100°, find m∠Q and m∠R.**

m∠Q = _____

m∠R = _____

EXAMPLE : In circle A, m∠1 = (6x + 11)°, m∠2 = (9x + 19)°, m∠3 = (4y − 25)°, m∠4 = (3y − 9)°, and $\overset{\frown}{PQ} \cong \overset{\frown}{RS}$. Find m∠1, m∠2, m∠3, and m∠4.

m∠1 = _____

m∠2 = _____

m∠3 = _____

m∠4 = _____

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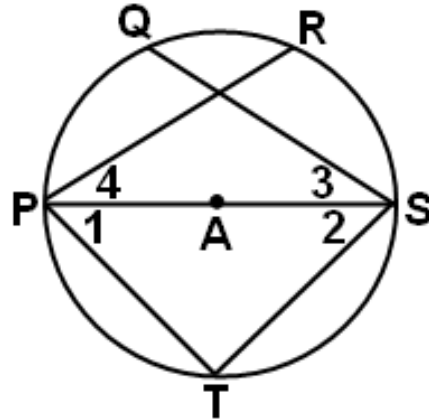
Practice:

Find the value of the inscribed angle.