

Les. 31.2: Areas of Circles and Sectors

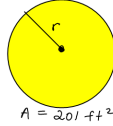
- A sector of a circle is the region bounded by two radii of the circle and their intercepted arc

[Ex. 1: Use the formula for the area of a circle]

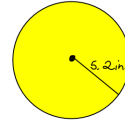
- The area of a circle is Pi times the square of the radius

Find the indicated measure.

a. radius



b. area



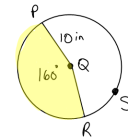
YOUR TURN

1. The diameter of the circle is 11 centimeters. Find the area.
2. The area of the circle is 158.3 square yards. Find the radius.
3. The area of a circle is 1024π square meters. Find the diameter.

[Ex. 2: Find the area of the sectors]

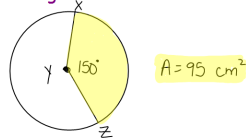
- The ratio of the area of a sector of a circle to the area of the whole circle (πr^2) is equal to the ratio of the measure of the intercepted arc to 360° .

Find the areas of the sectors formed by $\angle PQR$.



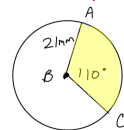
[Ex. 3: Use the area of a sector theorem]

Use the diagram to find the area of $\odot Y$.



YOUR TURN

1. Find the areas of the sectors formed by $\angle ABC$.



2. Find the area of $\odot H$.

