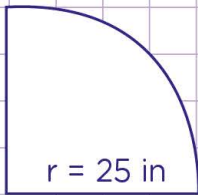


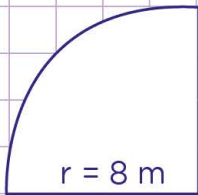
Name: Class:

Quarter circles: calculate area, perimeter, and radius.

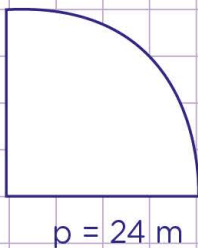
1. The radius of a quarter circle is 25 inches. What is the circle's area. Take 3.14 for π .



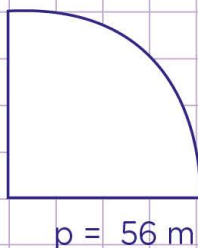
2. The radius of a quarter circle is 8 meters. What is the circle's area. Take 3.14 for π .



3. The perimeter of a quarter circle is 24 meters. What is the circle's radius. Take 3.14 for π .



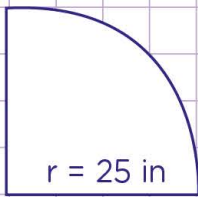
4. The perimeter of a quarter circle is 56 meters. What is the circle's radius. Take 3.14 for π .



Name: Class:

Quarter circles: calculate area, perimeter, and radius.

1. The radius of a quarter circle is 25 inches. What is the circle's area. Take 3.14 for π .



Let's set up the formula for the area of a quarter circle.

$$\text{Area} = \frac{\pi r^2}{4}$$

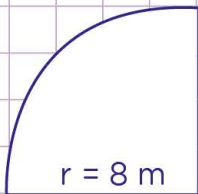
Substitute $r = 25$ in into the formula.

$$(3.14 \times 25 \text{ in} \times 25 \text{ in}) / 4$$

$$1,962.5 \text{ in} / 4 = 490.625 \text{ in}^2$$

So the circle's area is 490.625 in²

2. The radius of a quarter circle is 4 meters. What is the circle's area. Take 3.14 for π .



Let's set up the formula for the area of a quarter circle.

$$\text{Area} = \frac{\pi r^2}{4}$$

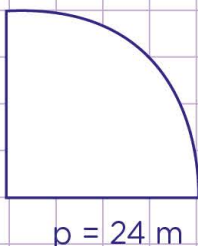
Substitute $r = 8$ m into the formula.

$$(3.14 \times 8 \text{ m} \times 8 \text{ m}) / 4$$

$$200,96 / 4 = 50.24 \text{ m}^2$$

So the circle's area is 50.24 m².

3. The perimeter of a quarter circle is 24 meters. What is the circle's radius. Take 3.14 for π .



Let's set up the formula for the radius of a quarter circle.

$$P = \frac{2\pi r}{4} + 2r \longrightarrow P = \frac{\pi r}{2} + 2r$$

Substitute $p = 24$ m into the formula

$$24 = 1.57r + 2r$$

$$24 = 3.57r$$

$$r = 24 / 3.57 = 6.72$$

So the circle's radius is 6.72.