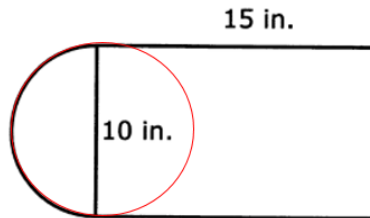


Possible Solutions

Solution 1

For the March Madness tournament, the officials want to paint each key of the court a different color. If there are 2 keys on the basketball court in the shape below, how much paint is needed to completely paint both of them?



10 inches is the diameter of the full circle. Therefore, the radius is equal to 5 in., since the radius is half of the diameter.

$$1 - \text{rectangle} \quad A = \ell \cdot w$$

$$1 - \text{semi-circle} \quad A = \frac{1}{2} \pi \cdot r^2$$

$$A = \ell \cdot w + \frac{1}{2} \pi \cdot r^2$$

$$A = 15 \cdot 10 + \frac{1}{2} (3.14 \cdot 5^2)$$

$$A = 150 + \frac{1}{2} (3.14 \cdot 25)$$

$$A = 150 + \frac{1}{2} (78.5)$$

$$A = 150 + 39.25$$

$$A = 189.25 \text{ in}^2$$

However, there are 2 keys on the basketball court.

$$A = 189.25 \cdot 2$$

$$A = 378.5 \text{ in}^2$$

Solution 2

Rectangle

$$A = \ell \cdot w$$

$$A = 15 \cdot 10$$

Semi-circle

$$A = \frac{1}{2} \pi \cdot r^2$$

$$A = \frac{1}{2} (3.14 \cdot 5^2)$$

$$A = 150$$

$$A = \frac{1}{2} (3.14 \cdot 25)$$

$$A = \frac{1}{2} (78.5)$$

$$A = 39.25$$

Total area = area of rectangle + area of semi-circle

$$A = 150 + 39.25$$

$$A = 189.25 \text{ in}^2$$

However, there are 2 keys on the basketball court.

$$A = 189.25 \cdot 2$$

$$A = 378.5 \text{ in}^2$$