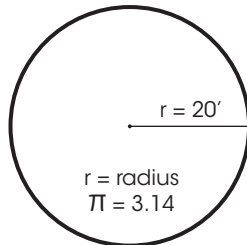


# Calculation Techniques & Conversions

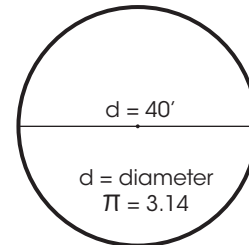
Area of a Circle =  $\pi r^2$



Example:

$$\begin{aligned} \text{Area} &= \pi r^2 \\ \text{Area} &= 3.14 \times (20' \times 20') \\ \text{Area} &= 3.14 \times 400' \\ \text{Area} &= 1256 \text{ SF} \end{aligned}$$

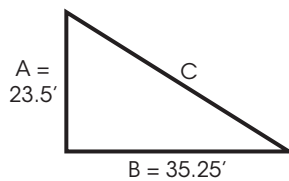
Circumference of a Circle =  $\pi d$  or  $2 \pi r$



Example:

$$\begin{aligned} \text{Circumference} &= \pi d \\ \text{Circumference} &= 3.14 \times 40' \\ \text{Circumference} &= 125.6' \end{aligned}$$

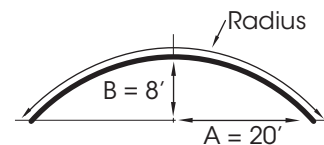
Hypotenuse of a Right Triangle  
 $C = \sqrt{A^2 + B^2}$



Example:

$$\begin{aligned} C &= \sqrt{A^2 + B^2} \\ C &= \sqrt{23.5^2 + 35.25^2} \\ C &= \sqrt{(23.5 \times 23.5) + (35.25 \times 35.25)} \\ C &= \sqrt{552.25 + 1242.56} \\ C &= \sqrt{1797.81} \\ C &= 42.3652' \end{aligned}$$

Radius of an Arc =  $(A^2 + B^2) \div 2B$



Example:

$$\begin{aligned} \text{Radius} &= (A^2 + B^2) \div 2B \\ \text{Radius} &= (20^2 + 8^2) \div (2 \times 8) \\ \text{Radius} &= (400 + 64) \div 16' \\ \text{Radius} &= 464 \div 16' \\ \text{Radius} &= 29' \end{aligned}$$

Square Footage Conversions

$$\begin{aligned} 12'' \times 12'' &= 1 \text{ sf} & 12'' \times 18'' &= 1.5 \text{ sf} \\ 12'' \times 24'' &= 2 \text{ sf} & 18'' \times 18'' &= 2.25 \text{ sf} \\ 18'' \times 24'' &= 3 \text{ sf} & 24'' \times 24'' &= 4 \text{ sf} \end{aligned}$$

Metric Conversion Rate

$$1'' = 25.4\text{mm}$$

$$\text{Example : } 597\text{mm} \div 25.4 = 23.5''$$

$$\text{Example: } 23.5'' \times 25.4 = 597\text{mm}$$

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