

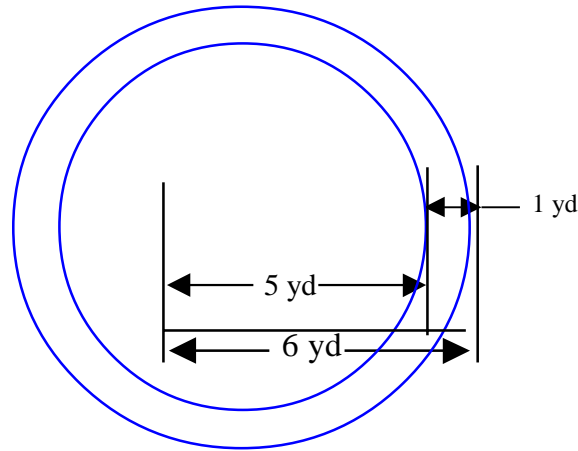


Math Study Strategies

Math for Landscaping

Landscaping Estimation

A landscaper uses area formulas to compute estimates for his/her work . If he/she estimates the cost to be \$20 per square yard, what price will the landscaper quote to the park district to build a 1-yard-wide sidewalk around a circular flower bed 10 yards in diameter?



1. He/she finds the radius of the flower bed.

$$r = \frac{d}{2}$$

$$r = \frac{10yd}{2} = 5yd.$$

2. He/she computes the area of the flower bed.

$$A = \pi r^2$$

$$A = 3.14(5)(5)$$

$$A = 78.5 \text{ sq. yd.}$$

3. He/she finds the radius of the flower bed plus the sidewalk.

$$r = 5 + 1 = 6yd.$$

4. He/she computes the area of the flower bed plus the sidewalk.

$$A = \pi r^2$$

$$A = 3.14(6)(6)$$

$$A = 113.04 \text{ sq. yd.}$$

5. He/she subtracts the area of the flower bed from the area of the flower bed plus the sidewalk to get the area of the sidewalk.

$$\begin{array}{r} 113.04 \text{ sq. yd.} \\ - 78.50 \\ \hline 34.54 \text{ sq. yd.} \end{array}$$

6. He/she multiplies the area of the sidewalk by \$20 to get the cost of the job.

$$\begin{array}{r} 34.54 \\ \times \quad \$20 \\ \hline \$690.80 \end{array}$$

