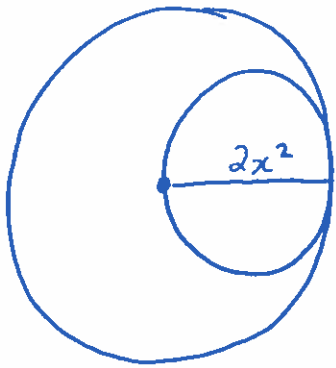


A: Multiplying Monomials by Monomials Continued

Example 3:

$2x^2$ is the radius of the large circle and the diameter of the small circle. Write the ratio of the area of the large circle to the area of the small circle in simplest form.



$$\begin{aligned}A_L &= \pi r^2 \\&= \pi (2x^2)^2 \\&= \pi (2x^2)^{\overbrace{2}^2} \\&= \pi (4x^{2 \times 2}) \\&= \underline{4\pi x^4}\end{aligned}$$

$$\begin{aligned}A_s &= \pi r^2 \\&= \pi (x^2)^2 \\&= \pi (x^{2 \times 2}) \\&= \underline{\pi x^4}\end{aligned}$$

$$\begin{aligned}r &= \frac{2x^2}{2} \\&= x^2\end{aligned}$$

Ratio

$$\begin{aligned}\frac{A_L}{A_s} &= \frac{4\pi x^4}{\pi x^4} \\&= \frac{4 \cancel{\pi} \cancel{x^4}}{1 \cancel{\pi} \cancel{x^4}}\end{aligned}$$

$$= \frac{4}{1} \quad 4 \text{ to } 1 \text{ Ratio.}$$