

8.2

$$| \cdot | = | \quad |^2 = | \quad |^n = |$$

$$| \cdot | \cdot | = | \quad |^3 = |$$

$$| \cdot | \cdot | \cdot | = | \quad |^4 = |$$

$$| \cdot | \cdot | \cdot | \cdot | = |$$

$$(-1)(-1) = | \quad (-1)^2 = |$$

$$(-1)(-1)(-1) = -| \quad (-1)^3 = -|$$

$$(-1)^4 = |$$

$$(-1)^5 = -|$$

$$(-1)^6 = |$$

$$(-2)^2 = 4$$

$$(-2)^3 = -8$$

$$(-2)^4 = 16$$

$$(-2)^5 = -32$$

$$-2^4 = -16$$

$$-2^5 = -32$$

$$-3^2 = -9$$

$$(-3)^2 = 9$$

$$(x^3)^2 \quad x^6$$

$$x^3 \cdot x^3$$

$$x \cdot x \cdot x \cdot x \cdot x \cdot x$$

Power of Power Property

$$(x^m)^n = x^{mn}$$

$$(a^3b)^2$$

$$a^6b^2$$

$$(7r^2s^3t)^2$$

$$49r^4s^6t^2$$

$$(-2x^3)^2$$

$$4x^6$$

$$(-2x^3)(-2x^3)$$

$$4x^6$$

$$-(3x^2)^2$$

$$-9x^4$$

$$-[(3x^2)(3x^2)]$$

$$-[9x^4]$$

$$-9x^4$$

$$(-4b^2c^3)^3(2abc)^2$$

$$\begin{array}{l} \frac{76}{\times 4} \\ \frac{64}{\times 4} \\ \hline 256 \end{array} (-64b^6c^9)(4a^2b^2c^2)$$

$$-256a^2b^8c^{11}$$

$$b^6 \cdot b^2 \\ b^8$$

$$\left(\frac{4x^2y}{5z}\right)^2$$

$$\frac{16x^4y^2}{25z^2}$$

$$\frac{(4x^2y)^2}{(5z)^2}$$

$$\left(\frac{2^2 a^3 b^1}{1 a^1 b^1}\right)^2$$

$$\frac{1 \cdot a \cdot a \cdot a}{1 \cdot a}$$

Cancel first

$$(2a^3)^2 \\ 4a^6$$

$$\left(\frac{4a^4b}{2ab}\right)^2$$

Square first

$$\frac{16a^8b^2}{4a^2b^2}$$

Reduce

$$4a^6$$

$$\frac{2}{3} \cdot \frac{3}{4}$$

$$\frac{6}{12} \\ \frac{1}{2}$$

$$\frac{1}{2}$$

$$(-5m^2n)^3 (3mn)^2$$

$$(-125m^6n^3)(9m^2n^2)$$

$$\begin{array}{r} 2^4 \\ 125 \\ 9 \\ \hline 1125 \end{array} -1125m^8n^5$$

Evaluate

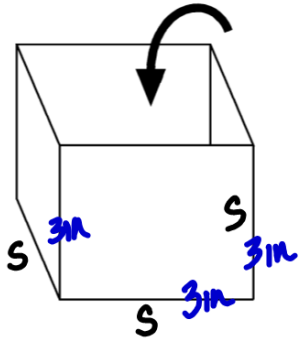
$$(10^2)^4$$

$$10^8$$

$$1,000,000$$

Simplify

$$10^8$$



Cube  
Volume =  $lwh$

$$V = s \cdot s \cdot s$$

$$V = s^3$$

$$V = 3^3$$

$$V = 27 \text{ m}^3$$

$$V = 6^3$$

$$V = 216 \text{ m}^3$$

$$\frac{36}{216}$$

Volume 8 times

Double each side

Cube

$$\times 2^3$$

$$2^3 = 8$$

Side

$s$

$2s$

Volume

$s^3$

$(2s)^3$

$8s^3$

8 times larger

p 381

26-64 E

Simplify  $-x^3$