Expressions Used In Word Problems - Step-by-Step Lesson
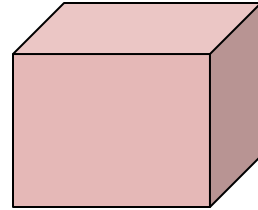
What is the volume and area of a cube with sides that measure 8/4 feet?

Explanation:

Step 1) First see what is being asked.

Step 2)

The volume of a cube can be expressed as: volume = (length of sides) ^{3}

The area of a cube can be expressed as: area = 6 (length of sides) ^{2}

Step 3) Volume = (length of sides) ^{3}

$$\text{Volume} = \left(\frac{8}{4}\right)^3$$

$$\text{Volume} = \left(\frac{8}{4} \times \frac{8}{4} \times \frac{8}{4}\right)$$

$$\text{Volume} = \left(\frac{512}{64}\right) \text{ or } 8 \text{ feet}^3$$

Area = 6 (length of sides) ^{2} $\qquad\qquad \dfrac{8}{4} = 2$

Area = 6 (2) ^{2}

Area = 6 x 4

Area = 24 feet ^{2}