Cubes & Cube Roots Practice

1) Lucy is using various sized boxes to store her jewelry in. Fill in the blanks with the correct side

length or volume for each box. Don't forget units!

    a. 5-inch sides with a volume of _____

    b. 2-inch sides with a volume of _____

    c. _____ sides with a volume of 27 inches^3

    d. 6-inch sides with a volume of _____

2) Evaluate $\sqrt[3]{-\dfrac{8}{27}}$.

3) FedEx designs cube-shaped cardboard boxes. Fill in the blanks with the correct side length for

each box. Don't forget units!

    a. 3-inch sides with a volume of _____

    b. _____ sides with a volume of 512 inches^3

    c. _____ sides with a volume of 343 inches^3

    d. _____ sides with a volume of 729 inches^3

4) Evaluate $\sqrt[3]{\dfrac{64}{125}}$

5) A cube has a volume of $\dfrac{343}{1000}$ ft^3. The formula for the volume of a cube is V = s^3, where V

represents volume and s represents side length. What is the side length of the cube described?

6) ▣ Calculator Problem: Mike helps the kids he is babysitting build a spaceship out of cube-shaped cardboard boxes. Fill in the blanks with the correct side length or volume for each box. Don't forget units!
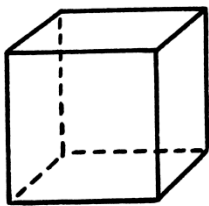
    a. _____ sides with a volume of 125,000 inches^3

    b. 90-inch sides with a volume of _____

    c. _____ sides with a volume of 1,000,000 inches^3
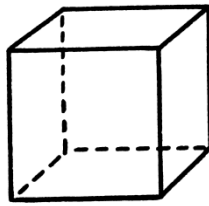
    d. 110-inch sides with a volume of _____

7) Given the side length of the cube, find the volume.

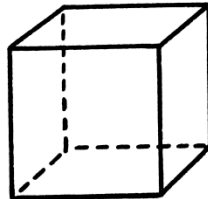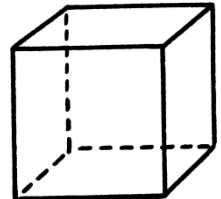a. s = 5 in   b. s = 8 m   c. $s = \frac{1}{2}$ yd   d. $s = \frac{3}{5}$ cm
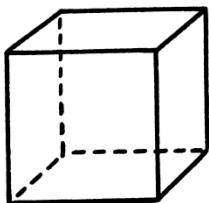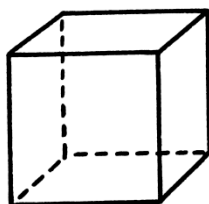
8) Given the volume of the cube, find the side length.

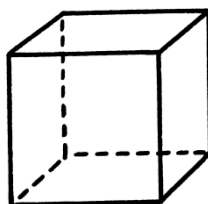a. V = 1000 m^3 b. V = 8 in^3 c. $V = \frac{1}{64}$ cm^3 d. $V = \frac{216}{343}$ yd^3