

LESSON 6: Cube Roots

Homework

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Name _____ **Date** _____**Directions:** For Problems 1 – 6, find each cube root using prime factorization if necessary.

1. $\sqrt[3]{125}$

2. $\sqrt[3]{1}$

3. $\sqrt[3]{\frac{27}{64}}$

4. $\sqrt[3]{\frac{8}{125}}$

5. $\sqrt[3]{27}$

6. $\sqrt[3]{216}$

For Problems 7 – 10, find the value of x for each equation.

7. $x^3 = \frac{8}{125}$

8. $x^3 = 1,000$

9. $x^3 = \frac{1}{343}$

10. Zachary wants to build a storage container in the shape of a cube to hold 2744 cubic inches of miscellaneous files. Find the length of one side of the container.