Section 9.3: Finding Cube Roots Name: _____
In Class Notes

A _____ _____ of a number p is a number whose cube is equal to p.

The symbol _____ is used to represent a cube root.

A _____ _____ is a number that can be written as the cube of an integer.

Finding Cube Roots

Ex:) Find each cube root.

a. $\sqrt[3]{8}$ b. $\sqrt[3]{-27}$ c. $\sqrt[3]{\frac{1}{64}}$ Notes:

OYO:) Find each cube root.

a. $\sqrt[3]{1}$ b. $\sqrt[3]{-343}$ c. $\sqrt[3]{-\frac{27}{1000}}$ Notes:

Evaluating Expressions Involving Cube Roots

Ex:) Evaluate each expression.

a. $2\sqrt[3]{-216}$ b. $\left(\sqrt[3]{125}\right)^3$ Notes:

OYO:) Evaluate each expression.

a. $18 - 4\sqrt[3]{8}$ b. $5\sqrt[3]{512} - 19$ Notes:

Solving Equations Using Cube Roots

Ex:) Solve each equation.

a. $x^3 = 216$ b. $-\frac{1}{4}n^3 = 2$ Notes:

OYO:) Solve each equation.

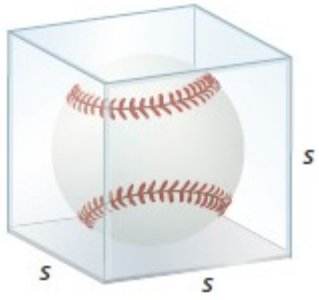
a. $z^3 = -1000$ b. $3b^3 = 1029$ Notes:

c. $33 = -\frac{1}{5}m^3 + 8$

Modeling Real Life

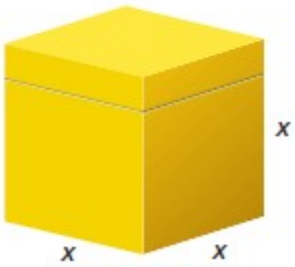
Ex:) The baseball display case is made of plastic. How many square inches of plastic are used to make the case?

Notes:



Volume = 125 in.^{3}

OYO:) You have 275 square inches of wrapping paper. Do you have enough wrapping paper to wrap the gift box shown? Explain.

Notes:

Volume = 343 in.^{3}