

## Math 8

Our Goal: To learn to find cube roots

Warm Up: Please have your homework out for checking.  
Thank you.

Today's participation measures

- Classwork: 7.2 Practice A handout
- Homework: 7.2 Exercises, p.298: 3-21 (multiples of 3)
- iready is due tomorrow (the snow day did not make this a "short" week)

Previous homework

7.1 Extra Practice handouts

**Find the square root(s).**

1.  $\sqrt{36}$

2.  $-\sqrt{64}$

3.  $\sqrt{\frac{49}{81}}$

4.  $-\sqrt{225}$

5.  $\sqrt{121}$

6.  $\sqrt{\frac{144}{169}}$

Every positive number has 2  
Square roots.

Let's write this down together,

"Every number... has 1 cube root.

Find the cube root of 27.

$$3 \cdot 3 \cdot 3 = 27$$

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

Find each cube root.

a.  $\sqrt[3]{8}$

$$2 \cdot 2 \cdot 2 = 8$$

b.  $\sqrt[3]{-27}$

$$-3 \cdot -3 \cdot -3 = -27$$

c.  $\sqrt[3]{\frac{1}{64}}$

$$\frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4}$$

$$\frac{\sqrt[3]{1}}{\sqrt[3]{64}} = \frac{1}{4}$$

Evaluate each expression.

a.  $2\sqrt[3]{-216}$

b.  $(\sqrt[3]{125})^3$

Find the cube root.

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

2.  $\sqrt[3]{-343}$

3.  $\sqrt[3]{-\frac{27}{1000}}$

Evaluate the expression.

4.  $18 - 4\sqrt[3]{8}$

5.  $(\sqrt[3]{-64})^3 + 43$

6.  $5\sqrt[3]{512} - 19$

$$\sqrt[3]{39,304} = 34$$

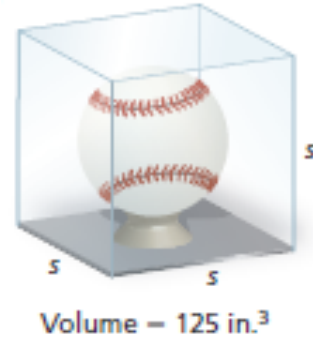
**Evaluate**  $\frac{x}{4} + \sqrt[3]{\frac{x}{3}}$  **when**  $x = 192$ .

**Evaluate the expression for the given value of the variable.**

**7.**  $\sqrt[3]{8y} + y, y = 64$

**8.**  $2b - \sqrt[3]{9b}, b = -3$

Find the surface area of the baseball display case.



9. The volume of a music box that is shaped like a cube is 512 cubic centimeters. Find the surface area of the music box.

