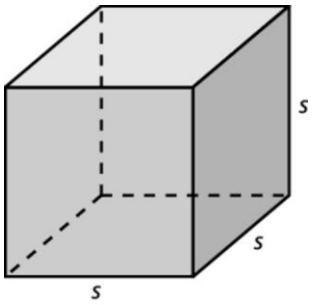
Name_____ Date _____

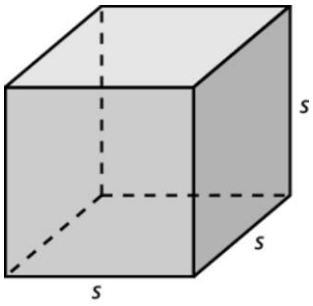
7.2 Practice A

Find the edge length of the cube.

1. Volume $= 27{,}000\ \text{cm}^3$



2. Volume $= \frac{1}{8}\ \text{in.}^3$



Find the cube root.

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

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

5. $\sqrt[3]{-8}$

6. $\sqrt[3]{-1000}$

7. $\sqrt[3]{8000}$

8. $\sqrt[3]{512}$

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

10. $\sqrt[3]{0.001}$

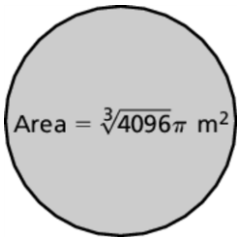
Copy and complete the statement with <, >, or =.

11. $-\sqrt[3]{27}$? -4

12. $\sqrt[3]{64}$? $\sqrt{16}$

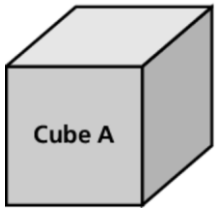
Find the circumference of the circle.

14.

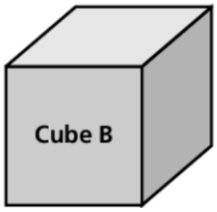


15. Which cube has a greater edge length? How much greater is it?

Volume = 343 ft^3



Surface Area = 384 ft^2



Name _____ Date _____

7.2 Practice B

Find the cube root.

1. $\sqrt[3]{343}$

2. $\sqrt[3]{-1331}$

3. $\sqrt[3]{-8000}$

4. $\sqrt[3]{3375}$

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

6. $\sqrt[3]{-\frac{125}{27}}$

Evaluate the expression.

7. $13 + \left(\sqrt[3]{125}\right)^3$

8. $2\frac{2}{3} - \left(\sqrt[3]{\frac{1}{27}}\right)^3$

9. $24 + \left(\sqrt[3]{-1000}\right)^3$

Evaluate the expression for the given value of the variable.

10. $\sqrt[3]{4t} + 3t,\ t = 54$

11. $\sqrt[3]{\frac{n}{24}} - \frac{n}{25},\ n = 375$

12. The volume of storage pod that is shaped like a cube is 1728 cubic feet.

a. What is the edge length of the storage pod?

b. What is the surface area of the storage pod?

c. What is the area of the floor space of the storage pod?

Copy and complete the statement with <, >, or =.

13. $0.25 \_\_?\_\_ \sqrt[3]{0.008}$

14. $\sqrt{729} \_\_?\_\_ \sqrt[3]{729}$

15. There are infinitely many pairs of numbers of which the sum of their cube roots is zero. Give two of these pairs.

16. The radius of a sphere can be represented by $r = \sqrt[3]{\frac{3V}{4\pi}}$, where V is the volume of the sphere. What is the radius of a sphere with a volume of 36π cubic meters?

Solve the equation.

17. $(4x - 1)^3 = 343$

18. $(15x^3 - 2)^3 = 2197$