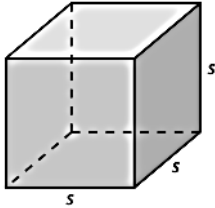


Cube Roots

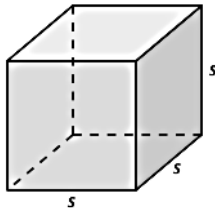
- VOCABULARY** Is 25 a perfect cube? Explain.
- REASONING** Can the cube of an integer be a negative number? Explain.

Find the edge length of the cube.

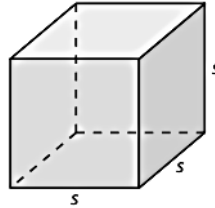
3. Volume = 125,000 in.³



4. Volume = $\frac{1}{27}$ ft³



5. Volume = 0.064 m³



Find the cube root.

6. $\sqrt[3]{729}$

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

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

9. $\sqrt[3]{1728}$

10. $\sqrt[3]{-\frac{1}{512}}$

11. $\sqrt[3]{\frac{343}{64}}$

Evaluate the expression.

12. $18 - (\sqrt[3]{27})^3$

13. $(\sqrt[3]{-\frac{1}{8}})^3 + 3\frac{3}{4}$

14. $5\sqrt[3]{729} - 24$

15. $\frac{1}{4} - 2\sqrt[3]{-\frac{1}{216}}$

16. $54 + \sqrt[3]{-4096}$

17. $4\sqrt[3]{8000} - 6$

Evaluate the expression for the given value of the variable.

18. $\sqrt[3]{\frac{n}{4}} + \frac{n}{10}$, $n = 500$

19. $\sqrt[3]{6w} - w$, $w = 288$

20. $2d + \sqrt[3]{-45d}$, $d = 75$

21.

ICE SCULPTURE The volume of a cube of ice for an ice sculpture is 64,000 cubic inches.

- What is the edge length of the cube of ice?
- What is the surface area of the cube of ice?