Finding a Cube Root to Solve Problems

➤ **Solve each equation.**

1 $x^3 = 64$

4

2 $a^3 = 1$

1

3 $y^3 = 27$

3

4 $p^3 = \frac{1}{8}$

$\frac{1}{2}$

5 $e^3 = 1{,}000$

10

6 $h^3 = \frac{125}{216}$

$\frac{5}{6}$

7 $b^3 = 81$

$\sqrt[3]{81}$

8 $k^3 = \frac{27}{512}$

$\frac{3}{8}$

9 $g^3 = 125$

5

10 $w^3 = \frac{49}{100}$

$\sqrt[3]{\frac{49}{100}}$

11 $q^3 = 729$

9

12 $t^3 = \frac{8}{343}$

$\frac{2}{7}$

13 $r^3 + 2 = 10$

2

14 $z^3 - 24 = 101$

5

15 $s^3 - 9 = 216$

$\sqrt[3]{225}$

16 When finding the cube root, will there be both a positive and a negative solution? Explain.

There will only be one solution to a cube root equation. When a number is cubed, it keeps the sign that it starts with, so a positive number cubed is always positive and a negative number cubed is always negative.

GRADE 8