1 Know That Every Positive Real Number Has Two Square Roots

Recall: The positive or principal square root of a positive number $a$ is written as $\sqrt{a}$. The negative square root is written as $-\sqrt{a}$.

Consider the equation: $x^2 = 64$  
Two solutions: $x = 8$  
$x = -8$

Example 1 Determine both square roots of each number.

a. 16  
b. 144  
c. 52

2 Solve Quadratic Equations Using the Square Root Property

If $x^2 = a$, then $x = \pm \sqrt{a}$

Example 2 Solve.

a. $x^2 - 81 = 0$  
b. $x^2 - 22 = 78$

c. $x^2 - 29 = 0$  
d. $(x + 3)^2 = 36$

e. $(4m - 1)^2 + 6 = 51$  
f. $(5a - 6)^2 - 30 = 70$