

Notes 5

Notes 10-4 - Solving Quadratic Equations

Learning Target - I can solve quadratic equations using square roots.

Example 2 - Using Square Roots - Solve each equation. * Don't forget the $\pm$.

a) $x^2 = 16$

$\sqrt{16}$ $x = \pm 4$ $x = 4, x = -4$

b) $3x^2 - 75 = 0$
 $+75 +75$
 $3x^2 = 75$

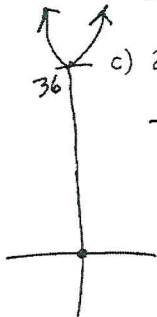
$3x^2 = 75$
 $\frac{3x^2}{3} = \frac{75}{3}$
 $x^2 = 25$

$x = \pm 5$

c) $2x^2 + 36 = 0$
 $-36 -36$
 $2x^2 = -36$

$x^2 = -18$

cannot square root a negative
 - no real solution



Check Understanding - Solve each equation.

1) $k^2 - 25 = 0$
 $+25 +25$

$k^2 = 25$

$x = \pm 5$

$\checkmark 5^2 - 25 = 0 \checkmark$

$(-5)^2 - 25 = 0 \checkmark$
 or graph

2) $3n^2 + 12 = 12 - 12$
 -12

$3n^2 = 0$
 $\frac{3n^2}{3} = \frac{0}{3}$
 $n^2 = 0$

$x = 0$

3) $2g^2 + 32 = 0$

$-32 -32$

$2g^2 = -32$
 $\frac{2g^2}{2} = \frac{-32}{2}$

$g^2 = -16$

no real solution

homework - p. 531 #1-18 - use graph paper for #1-9