DAY 6

Solving Quadratics: Square Roots Method

Today we will solve quadratics using square roots. This method only works when there is no "x" term.

$ax^2 + c = 0$

Steps	$x^2 - 49 = 0$
Step 1: Isolate x^2	+49 +49 $x^2 = 49$
Step 2: Take the **SQUARE ROOT** of both sides	$\sqrt{x^2} = \sqrt{49}$ $x = \pm 7$

Directions: Use the Square Roots Method to solve each quadratic equation:

1. $x^2 - 16 = 0$	**2.** $x^2 - 100 = 0$ +100 +100 $x^2 = 100$ $\sqrt{x^2} = \sqrt{100}$ $x = \pm 10$	**3.** $x^2 + 25 = 0$
4. $x^2 + 7 = 88$	**5.** $x^2 + 7 = 4$	**6.** $x^2 - 5 = -4$ +5 +5 $x^2 = 1$ $\sqrt{x^2} = \sqrt{1}$ $x = \pm 1$
7. $6x^2 = 54$	**8.** $-2x^2 = -98$	**9.** $\left(\frac{3}{4}x^2 = 12\right)\frac{4}{3}$ reciprocal $x^2 = 16$ $\sqrt{x^2} = \sqrt{16}$ $x = \pm 4$
10. $\frac{1}{2}x^2 - 5 = 45$	**11.** $3x^2 = 432$	**12.** $-4x^2 = -16$

13. $3x^2 - 108 = 0$	**14.** $5x^2 - 45 = 0$	**15.** $\frac{1}{2}x^2 - 3 = 29$ +3 +3 $\left(\frac{1}{2}x^2 = 32\right)\frac{2}{1}$ reciprocal $x^2 = 64$ $\sqrt{x^2} = \sqrt{64}$ $x = \pm 8$
16. $9x^2 - 16 = 0$	**17.** $4x^2 - 1 = 24$	**18.** $4x^2 + 16 = 8$
19. $x^2 = 19$	**20.** $x^2 - 41 = 0$	**21.** $x^2 + 5 = 17$
22. $2x^2 - 126 = 0$	**23.** $36x^2 = 100$	**24.** $-8x^2 - 6 = -30$
25. $\frac{1}{3}x^2 + 2 = 14$	**26.** $\frac{4}{5}x^2 - 1 = 7$ +1 +1 $\left(\frac{4}{5}x^2 = 8\right)\frac{5}{4}$ $\sqrt{x^2} = \sqrt{10}$ $x = \pm\sqrt{10}$	**27.** $\left(\frac{1}{4}(x^2 - 17) = 6\right)\frac{4}{1}$ reciprocal $x^2 - 17 = 8$ +17 +17 $x^2 = 25$ $\sqrt{x^2} = \sqrt{25}$ $x = \pm 5$
28. $6x^2 + 3 = 387$	**29.** $7x^2 - 7 = 168$	**30.** $25x^2 + 10 = 46$

What time is it?