

What questions do you have on your "Solving Quadratics by Taking Square Roots" worksheet?

$$\textcircled{5} \quad \frac{7n^2}{7} = \frac{-343}{7}$$
$$\sqrt{n^2} = \sqrt{-49}$$

$$n = \pm i\sqrt{49}$$
$$n = \pm 7i$$

P
E
R
S
O
N

Here is the quadratic formula. Solving quadratics using this formula works for ANY quadratic! Make sure your quadratic is equal to 0 before you begin.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

From your worksheet.

Solve each equation with the quadratic formula.

$$\begin{aligned} a &= 9 \\ b &= -1 \\ c &= -16 \end{aligned}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

1) $9n^2 - n - 16 = 0$

$$x = \frac{-(-1) \pm \sqrt{(-1)^2 - 4 \cdot 9 \cdot (-16)}}{2 \cdot 9} = \frac{1 \pm \sqrt{577}}{18}$$

$$\left\{ \frac{1 + \sqrt{577}}{18}, \frac{1 - \sqrt{577}}{18} \right\} \leftarrow \text{OR}$$

Solve each equation with the quadratic formula.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\begin{aligned} 11) \quad -4n^2 - 5 &= 8n \\ \quad \quad -8n \quad -8n \\ \hline -4n^2 - 8n - 5 &= 0 \end{aligned}$$

$$\begin{aligned} a &= -4 \\ b &= -8 \\ c &= -5 \end{aligned}$$

$$x = \frac{-(-8) \pm \sqrt{(-8)^2 - 4 \cdot (-4) \cdot (-5)}}{2 \cdot (-4)} =$$

$$= \frac{8 \pm \sqrt{-16}}{-8} = \frac{8 \pm i\sqrt{16}}{-8} = \frac{8 \pm 4i}{-8}$$

$$= \left(\frac{2 \pm i}{-2} \right) \text{ OR } \left\{ \frac{2+i}{-2}, \frac{2-i}{-2} \right\}$$

Homework

Solving Quadratics with the Quadratic Formula WKS