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

$i = \sqrt{-1}$

(8) $p^2 + 10 = -16$

$-10 \quad -10$

$\sqrt{p^2} = \sqrt{-26} = \sqrt{-1} \cdot \sqrt{26}$

i

$p = \pm i\sqrt{26}$

PEMDAS

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.

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

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From your worksheet.

Solve each equation with the quadratic formula.

$a = 9$
$b = -1$
$c = -16$

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

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

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

$$x = \frac{1 \pm \sqrt{577}}{18} \text{ or } \left\{ \frac{1 + \sqrt{577}}{18} \text{ & } \frac{1 - \sqrt{577}}{18} \right\}$$

Solve each equation with the quadratic formula.

$a = -4$
$b = -8$
$c = -5$

11) $-4n^2 - 5 = 8n$

$-8n \quad -8n$

$-4n^2 - 8n - 5 = 0$

$64 - 80$

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

$\sqrt{-1} \cdot \sqrt{16}$ $\quad i \cdot 4$

$$x = \frac{8 \pm \sqrt{-16}}{-8} = \frac{8 \pm 4i}{-8} = \frac{2 \pm i}{-2}$$

$$\text{OR } \left\{ \frac{2+i}{-2}, \frac{2-i}{-2} \right\}$$

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Homework

Solving Quadratics with the Quadratic Formula WKS

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