

Quiz Review

Name _____

Solve the following equations by **taking square roots**.

<p>1. $5(x+3)^2 + 1 = 26$</p>	<p>2. $x^2 - 50 = 0$</p>	<p>3. $7x^2 + 2 = 5x^2 + 4$</p>
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Solve the following equations by **factoring**.

<p>4. $x^2 - 2x - 8 = 0$</p>	<p>5. $3x^2 - 5x - 2 = 0$</p>	<p>6. $x^2 - x - 12 = 0$</p>
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Quiz Review
 ① Undo +/-
 ② Undo x/÷

Name _____

Solve the following equations by **taking square roots**. * Isolate x^2 or $()^2$
 * Use \pm

<p>1. $5(x+3)^2 + 1 = 26$</p> $\frac{5(x+3)^2 + 1}{-1 \quad -1} = \frac{26}{-1 \quad -1}$ $\frac{5(x+3)^2}{5} = \frac{25}{5}$ $\sqrt{(x+3)^2} = \sqrt{5}$ $x+3 = \pm\sqrt{5}$ $\frac{-3 \quad -3}{-3 \quad -3}$ <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x = -3 \pm \sqrt{5}$</div>	<p>2. $x^2 - 50 = 0$</p> $\frac{x^2 - 50}{+50 \quad +50} = \frac{0}{+50 \quad +50}$ $\sqrt{x^2} = \sqrt{50}$ <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x = \pm 5\sqrt{2}$</div>	<p>3. $7x^2 + 2 = 5x^2 + 4$</p> $\frac{7x^2 + 2}{-5x^2 \quad -5x^2} = \frac{5x^2 + 4}{-5x^2 \quad -5x^2}$ $\frac{2x^2 + 2}{-2 \quad -2} = \frac{4}{-2 \quad -2}$ $\frac{2x^2}{2} = \frac{2}{2}$ $\sqrt{x^2} = \sqrt{1}$ <div style="border: 1px solid black; padding: 5px; display: inline-block;">$x = \pm 1$</div>
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Solve the following equations by **factoring**.

<p>4. $x^2 - 2x - 8 = 0$</p> <p style="text-align: center;">Tri a = 1</p> $\begin{array}{r} -8 \\ -4 \quad \times \quad 2 \\ -2 \end{array}$ <p><u>Factors</u> $(x-4)(x+2) = 0$</p> $\begin{array}{r} x-4=0 \\ 4 \quad 4 \\ \hline \end{array} \quad \begin{array}{r} x+2=0 \\ -2 \quad -2 \\ \hline \end{array}$ <p><u>Solutions</u> $x=4$ $x=-2$</p>	<p>5. $3x^2 - 5x - 2 = 0$</p> <p style="text-align: center;">Tri a > 1</p> $\begin{array}{r} -6 \\ -6 \quad \times \quad 1 \\ -5 \end{array}$ $(x-\frac{6}{3})(x+\frac{1}{3}) = 0$ $(x-2)(3x+1) = 0$ $\begin{array}{r} x-2=0 \\ \hline \end{array} \quad \begin{array}{r} 3x+1=0 \\ -1 \quad -1 \\ \hline \end{array}$ $\frac{3x}{3} = \frac{-1}{3}$ <div style="border: 1px solid black; padding: 2px 10px;">$x = -\frac{1}{3}$</div>	<p>6. $x^2 - x - 12 = 0$</p> <p style="text-align: center;">Tri a = 1</p> $\begin{array}{r} -12 \\ -4 \quad \times \quad 3 \\ -1 \end{array}$ $(x-4)(x+3) = 0$ $\begin{array}{r} x-4=0 \\ 4 \quad 4 \\ \hline \end{array} \quad \begin{array}{r} x+3=0 \\ -3 \quad -3 \\ \hline \end{array}$ <div style="border: 1px solid black; padding: 2px 10px;">$x=4$</div> <div style="border: 1px solid black; padding: 2px 10px;">$x=-3$</div>
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