

**Essential Question: How do you solve equations using addition and subtraction?**

<b>Questions /Main Ideas</b>	<b>Class Notes</b>
What is a solution?	<p>Equations may be true for some values and false for others. A <b>solution</b> of an equation is a value that makes the equation true.</p> <p>Is 3 a solution to <math>x + 5 = 7</math>?</p> <p><math>3 + 5 = 7</math>?</p> <p>Both sides are not equal so 3 is not a solution.</p>
What are inverse operations?	<p>You can use inverse operations to solve equations. <b>Inverse operations</b> “undo” each other. Addition and subtraction are inverse operations.</p>
What is the addition property of equality?	<p>When you add the same number to each side of an equation, the two sides remain equal.</p> $\begin{array}{r} 8 = 8 \\ + 5 \quad + 5 \\ \hline 13 = 13 \end{array}$ $\begin{array}{r} x - 4 = 5 \\ + 4 \quad + 4 \\ \hline x = 9 \end{array}$
What is the subtraction property of equality?	<p>(Same as the addition property of equality but subtracting the same value from each side.)</p>

**Summary**

To solve an equation, you want to isolate the variable (get it by itself on one side). To this, you need to get rid of the other numbers on the same side by doing an inverse operation. If you do it on one side, you must do the same operation on the other.