BELLWORK:

(A) 

$\frac{-2x}{3} = \frac{-15}{2}$

Solve for $x$:

$3(x + 2) = 5x - 9$

$3x + 6 = 5x - 9$

$\frac{3x - 6}{3} = \frac{5x - 9}{3}$

$x = 7.5$

(B)

$3x + 2 = 8$

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1. Simplify: $3 + 5 \times 4 - 1 + 12 \div 3$

2. Evaluate: $x + 3y$ for $x = 2$, $y = -1$

3. Simplify: $\sqrt{36}$

4. Solve for $x$: $3x + 2 = 14$

5. Solve for $x$: $2x + 1 = 4x - 5$

Example 1: Solving Literal Equations

What is a literal equation?

What is a literal equation? A literal equation is an algebraic equation that contains more than one variable. It is important to understand the meaning of a literal equation, as it will be used in later topics.

Get the given variable by itself on one side of the equation.

Write an example of an algebraic equation:

Write an example of an algebraic expression:

Solving Equations

Directions: Partner A solves only the equations in column A. Partner B solves only the equations in column B. The solutions to both will be the same. If you agree on the solution, write 0 in the solution box. If you disagree on the solution, work together to find the mistake. Show all work.

<table>
<thead>
<tr>
<th>Column A (Partner A)</th>
<th>Column B (Partner B)</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10 = x + 7$</td>
<td>$1 + x = 4$</td>
<td>$x =$</td>
</tr>
<tr>
<td>$4x = -16$</td>
<td>$-8 = 2x$</td>
<td>$x =$</td>
</tr>
<tr>
<td>$2x + 6 = 10$</td>
<td>$4x + 1 = 10$</td>
<td>$x =$</td>
</tr>
<tr>
<td>$-3x + 4 = -5$</td>
<td>$-4x + 8 = -7$</td>
<td>$x =$</td>
</tr>
</tbody>
</table>

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1.5 – Literal Equations

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**Example 2: Writing and Solving Equations**

Jaren wants to buy a new phone, but his mom said he has to pay for it. He makes $10.50 an hour at his job. His sister said she would give him $10 if he did her chores for the week. If he does his sisters chores, and the phone he wants costs $700, write and solve an equation to figure out how many hours Jaren will have to work to have enough money to buy the phone:

\[ 10.50x + 10 = 700 \]

Solve for \( x \):

\[ 10.50x = 690 \]
\[ x = \frac{690}{10.50} \]
\[ x = 65.71 \text{ hours} \]

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A state park charges admission of $6 per person plus $3 for parking. Jo paid $27 when her car entered the park. Write and solve an equation to find the number of people in Jo's car:

\[ 6x + 3 = 27 \]
\[ 6x = 24 \]
\[ x = 4 \text{ people} \]

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Two cars leave Denver at the same time and travel in opposite directions. One car travels 10 mi/h faster than the other car. The cars are 300 mi apart in 3 hours. How fast is each car traveling?

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