

guided notes

NAME _____

DATE _____

Module 3 Solving Linear Equations of One Variable
Lesson 4 Solving Two-Step Linear Equations

Lesson Objectives

- Solve two-step equations.
- Check solutions.
- Determine if a number is a solution for a two-step equation.
- Provide reasons for each step in solving a two-step equation.

To solve equations, you must use _____ operations. You can think of this as working backwards.

If you pick a number, multiply by 5, and add 3, the result is 23. To find the original number you should _____ 3 from 23 to get _____. Then _____ by 5. The original number was _____.

Multiplying a number by 5 and then adding 3 to get a result of 23 can be written as the equation _____.

To evaluate the expression $5x + 3$, we would _____ first, and then _____. When we solve the equation by working backwards, we undo addition first by _____, and then undo multiplication by dividing.

Solve:	$5x + 3 = 23$	Check:	$5x + 3 = 23$
	$5x + 3 - \underline{\quad} = 23 - \underline{\quad}$		$5(\underline{\quad}) + 3 \stackrel{?}{=} 23$
	$5x = 20$		$\underline{\quad} + 3 \stackrel{?}{=} 23$
	$x = \underline{\quad}$		$23 = 23 \checkmark$

The solution is _____.

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Solve: $\frac{M}{6} - 10 = -12$ Check: $\frac{M}{6} - 10 = -12$

$\frac{M}{6} - 10 + \underline{\hspace{2cm}} = -12 + \underline{\hspace{2cm}}$ $-\frac{12}{6} - 10 \stackrel{?}{=} -12$

$\frac{M}{6} = \underline{\hspace{2cm}}$ $\underline{\hspace{2cm}} - 10 \stackrel{?}{=} -12$

$6 \cdot \frac{M}{6} = 6 \cdot (-2)$ $-12 = -12 \checkmark$

$M = \underline{\hspace{2cm}}$

The solution is _____.

1 Is 2 a solution of the equation $-7C - 10 = -4$?

Check: $-7C - 10 = -4$

$-7(\underline{\hspace{2cm}}) - 10 \stackrel{?}{=} -4$

$\underline{\hspace{2cm}} - 10 \stackrel{?}{=} -4$

$-24 \neq -4$

Circle the correct answer: 2 is/is not a solution.

2 Explain how to solve the equation $\frac{p}{5} + 9 = 13$

3 Solve: $-4J - 1 = 11$

It is not always necessary to show all the "steps", but be sure you can explain all your steps.

Each step has a _____.

Statements	Reasons
Example: $5x + 3 = 23$	Given
$5x = 23$	_____
$x = 4$	_____

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4 Explain the steps used to solve the equation $\frac{A}{-3} + 12 = 4$.

Statements	Reasons
$\frac{A}{-3} + 12 = 4$	Given
$\frac{A}{-3} = -8$	_____
$A = 24$	_____



