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Solving Linear Equations and Inequalities in One Variable - Guided Lesson Explanation

Explanation#1

We have to solve for a variable, use inverse operations to undo the operations in the equation. Be sure to do the same operation to both sides of the equation.

Solve for a

$\frac{a}{6} - 1 = 4$

$\frac{a}{6} - 1 + 1 = 4 + 1$ Add 1 to both sides/

$\frac{a}{6} = 5$ Multiply both sides by 6.

$a = 5 \times 6$

$a = 30$

Explanation#2

We have to solve for a variable, use inverse operations to undo the operations in the inequality. Be sure to do the same operation to both sides of the inequality.

$2 > \frac{x + 10}{4}$

$2 \times 4 > x + 10$ Multiply both sides by 4.

$8 > x + 10$

$8 - 10 > x$ Subtract 10 from both sides.

$-2 > x$

$x < -2$

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Explanation#3

We have like terms, or terms that have the same variables raised to the same powers. To subtract like terms, subtract their coefficients.

Combine the z terms:

$12y - 3y - 6 = 9$

$9y - 6 = 9$ Combine like terms (y)

Use inverse operations to isolate the variable.

$9y - 6 + 6 = 9 + 6$ Add 6 to both sides.

$9y = 15$

$y = \frac{15}{9}$ divide by 9 to solve for z

$y = \frac{5}{3}$ reduce the fraction.

This answer is 5/3.