 Name _____ Date _____ Per _____

Solve Equations with Variables on Both Sides

GUIDED NOTES

UNIT 2: ANALYZE AND SOLVE LINEAR EQUATIONS

LEARNING TARGET

I can solve equations with like terms on both sides of the equation; make sense of scenarios and represent them with equations.

- ☐ Solve Equations with Fractional Coefficients
- ☐ Solve Equations with Decimal Coefficients
- ☐ Solve Equations with Negative Coefficients

VOCABULARY

variables on both sides
the _____ appears on the left and on the right

fractional coefficient
a _____ in front of a variable, like $\frac{3}{4}x$

LCD
least common _____

decimal coefficient
a decimal in front of a _____, like $1.5x$

inverse operation
an operation that _____ another

negative coefficient
a negative number in front of a _____

opposite
the number with the other _____: $-3x$ and $3x$

KEY IDEAS

- ◇ Use inverse _____ to get the variable terms on one side and the _____ on the other; with fractions you may first multiply both sides by the LCD.
- ◇ Move the variable terms to one side and the _____ to the other. You can multiply by 10 or 100 to clear decimals.
- ◇ To move a negative variable term, add its _____ to both sides: to remove $-3x$, add $3x$.

WORKED EXAMPLES

EXAMPLE ① *Solve Equations with Fractional Coefficients*

Solve $\frac{3}{4}x + 2 = \frac{1}{4}x + 8$.

① Subtract $\frac{1}{4}x$: $\frac{1}{2}x + 2 = 8$.

② Subtract 2: $\frac{1}{2}x =$ _____.

③ Multiply by 2: $x =$ _____.

YOU TRY ①

Solve for s. $s = -5 + \frac{3}{2}s$

Answer: _____

Preview - the full worksheet and its answer key are at primeworksheet.com