

11-29-18

Aim: SWBAT solve and check one-step addition and subtraction equations including rational numbers.

HW: Packet Page 4

Quiz Tuesday (1-step equations)

Do Now: Packet Page 2

## How to Play the Equations Game

### **#1 Eliminating numbers on the same side as the variable**

- Constants eliminate with opposite sign
- Coefficients eliminate with division of the coefficient
- Denominators eliminate with multiplication of the denominator
- Fractional Coefficients eliminate with multiplication of the reciprocal

### **#2 Two-Step Equations**

- i. Eliminate the constant
- ii. Eliminate the coefficient or denominator

### **#3 Entire side is a fraction**

- i. Eliminate the denominator

### **#4 Distributive Property and Combining Like Terms Equations**

- i. Simplify before you solve
  - Eliminate parentheses
  - Combine Like Terms

### **#5 Variables on Both Sides Equations**

- i. Eliminate a variable term with opposite sign

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### **Checking an Equation**

- i. Rewrite the original equation
- ii. Substitute the answer for the variable
- iii. Evaluate until sides match using the Order of Operations

Aim: SWBAT solve and check one-step addition and subtraction equations including rational numbers.

Do Now: Answer the following questions.

The inverse operation of addition is subtraction

The inverse operation of subtraction is addition.

A number plus its opposite always sum to 0.

$$\begin{array}{r} 4 \\ -1 \\ \hline 3 \end{array} \quad \begin{array}{r} 3 \\ +1 \\ \hline 4 \end{array}$$

### #1 Eliminating numbers on the same side as the variable

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Solve and check, algebraically.

	A		B
1	$\begin{array}{r} x+7=16 \\ -7 \quad -7 \\ \hline x=9 \end{array}$	<p>CHECK</p> $\begin{array}{l} x+7=16 \\ 9+7=16 \\ 16=16 \end{array}$	$\begin{array}{r} x-7=16 \\ +7 \quad +7 \\ \hline x=23 \end{array}$ <p>CHECK</p> $\begin{array}{l} x-7=16 \\ 23-7=16 \\ 16=16 \end{array}$
2	$\begin{array}{r} -7+x=16 \\ +7 \quad +7 \\ \hline x=23 \end{array}$	<p>CHECK</p> $\begin{array}{l} -7+x=16 \\ -7+23=16 \\ 16=16 \end{array}$	$\begin{array}{r} 16=x-7 \\ +7 \quad +7 \\ \hline 23=x \end{array}$ <p>CHECK</p> $\begin{array}{l} 16=x-7 \\ 16=23-7 \\ 16=16 \end{array}$

$x=9 \Rightarrow$

$$\begin{array}{l} -7+x=16 \\ -7+9=16 \\ 2 \neq 16 \end{array}$$

Solve and check, algebraically.

	A	B	C
3	$-5 + x = 4$	$x + (-5) = 4$ $x - 5 = 4$ $+5 \quad +5$ <hr/> $x = 9$	$4 = -5 + x$
	CHECK	CHECK $x + (-5) = 4$ $9 + (-5) = 4$ $4 = 4$	CHECK

Solve and check, algebraically.

	A	B	
4	$x - 2.4 = 3.7$	$x + \frac{1}{2} = \frac{3}{4}$ $-\frac{1}{2} \quad -\frac{1}{2}$ <hr/> $x = \frac{1}{4}$	CHECK $x + \frac{1}{2} = \frac{3}{4}$ $\frac{1}{4} + \frac{1}{2} = \frac{3}{4}$ $\frac{3}{4} = \frac{3}{4}$

## HOMEWORK

Solve and check, algebraically.

	A	B	C	D
5	$t - 5 = 2$	CHECK	$23 = 6 + n$	CHECK
6	$13 = d - 27$	CHECK	$-204 = m - 41$	CHECK
7	$p + 3.4 = 4.4$	CHECK	$3.77 + c = 3.977$	CHECK
8	$\frac{2}{3} = d + \frac{1}{3}$	CHECK	$m + (-5) = -12$	CHECK
9	$-2 = b + (-4)$	CHECK	$r - (-36) = 5$	CHECK