

12-5-18

Aim: SWBAT solve and check multi-step equations.

HW: Packet Pages 14 - 15

Quiz tomorrow (2-step equations)

Do Now:

CLASSWORK/HOMEWORK

Solve and check, algebraically.

	A		B
1	$\begin{array}{r} 15 = -4p + 7 \\ -7 \quad \swarrow \nearrow \\ \hline 8 = -4p \\ -4 \quad \swarrow \nearrow \\ -2 = p \end{array}$	<p>CHECK</p> $\begin{array}{l} 15 = -4p + 7 \\ 15 \stackrel{?}{=} -4(-2) + 7 \\ 15 \stackrel{?}{=} 8 + 7 \\ 15 = 15 \end{array}$	$\begin{array}{r} 11 = \frac{h}{6} + 8 \\ -8 \quad \swarrow \nearrow \\ \hline 3 = \frac{h}{6} \\ \cdot 6 \quad \cdot 6 \\ \hline 18 = h \end{array}$ <p>CHECK</p> $\begin{array}{l} 11 \stackrel{?}{=} \frac{18}{6} + 8 \\ 11 \stackrel{?}{=} 3 + 8 \\ 11 = 11 \end{array}$
2	$\begin{array}{r} 6 + 2c = 15 \\ -6 \quad \swarrow \nearrow \\ \hline 2c = 9 \\ \cdot \frac{1}{2} \quad \cdot \frac{1}{2} \\ \hline c = \frac{9}{2} \end{array}$	<p>CHECK</p> $\begin{array}{l} 6 + 2c = 15 \\ 6 + 2 \cdot \frac{9}{2} \stackrel{?}{=} 15 \\ 6 + 9 \stackrel{?}{=} 15 \\ 15 = 15 \end{array}$	$\begin{array}{r} 7 + 5b = -23 \\ -7 \quad \swarrow \nearrow \\ \hline 5b = -30 \\ \cdot \frac{1}{5} \quad \cdot \frac{1}{5} \\ \hline b = -6 \end{array}$ <p>CHECK</p> $\begin{array}{l} 7 + 5b \stackrel{?}{=} -23 \\ 7 + 5(-6) \stackrel{?}{=} -23 \\ 7 - 30 \stackrel{?}{=} -23 \\ -23 = -23 \end{array}$
3	$\begin{array}{r} 20 - 6w = 14 \\ -20 \quad \swarrow \nearrow \\ \hline -6w = -6 \\ \cdot \frac{1}{-6} \quad \cdot \frac{1}{-6} \\ \hline w = 1 \end{array}$	<p>CHECK</p> $\begin{array}{l} 20 - 6w \stackrel{?}{=} 14 \\ 20 - 6 \cdot 1 \stackrel{?}{=} 14 \\ 20 - 6 \stackrel{?}{=} 14 \\ 14 = 14 \end{array}$	$\begin{array}{r} \frac{c}{3} - 7 = 5.3 \\ +7 \quad +7 \\ \hline \frac{c}{3} = 12.3 \\ \cdot 3 \quad \cdot 3 \\ \hline c = 36.9 \end{array}$ <p>CHECK</p> $\begin{array}{l} \frac{c}{3} - 7 \stackrel{?}{=} 5.3 \\ \frac{36.9}{3} - 7 \stackrel{?}{=} 5.3 \\ 12.3 - 7 \stackrel{?}{=} 5.3 \\ 5.3 = 5.3 \end{array}$
4	$\begin{array}{r} \frac{8}{3} \cdot \frac{3x}{5} = 12 \cdot \frac{5}{3} \\ \hline x = 20 \end{array}$	<p>CHECK</p> $\begin{array}{l} \frac{3x}{5} = 12 \\ \frac{3 \cdot 20}{5} \stackrel{?}{=} 12 \\ \frac{60}{5} \stackrel{?}{=} 12 \\ 12 = 12 \end{array}$	$\begin{array}{r} \frac{2}{8} \cdot \frac{5m}{2} = 35 \cdot \frac{-2}{5} \\ \hline m = -14 \end{array}$ <p>CHECK</p> $\begin{array}{l} \frac{-5m}{2} = 35 \\ \frac{(-5)(-14)}{2} \stackrel{?}{=} 35 \\ \frac{70}{2} \stackrel{?}{=} 35 \\ 35 = 35 \end{array}$

$$\frac{3x}{5} \leftrightarrow \frac{3}{5}x$$

$$-\frac{5m}{2} \leftrightarrow \frac{-5}{2}m$$

Aim: SWBAT solve and check multi-step equations.

#3 Entire side is a fraction

- ii. Eliminate the denominator

#4 Distributive Property and Combining Like Terms Equations

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

Solve and check, algebraically.

	A		B	
1	$\frac{3}{2} \cdot \frac{2x}{-3} = -4 \cdot \frac{-3}{2}$ $x = 6$	CHECK	$\frac{2x}{-3} - 10 = -4$ $\frac{2x}{-3} = -4 + 10$ $\frac{2x}{-3} = 6$ $2x = 6 \cdot -3$ $2x = -18$ $x = -9$	CHECK
		$\frac{2x}{-3} = -4$ $\frac{2 \cdot 6}{-3} \stackrel{?}{=} -4$ $\frac{12}{-3} \stackrel{?}{=} -4$ $-4 = -4$		$\frac{2x}{-3} - 10 = -4$ $\frac{2(-9)}{-3} - 10 \stackrel{?}{=} -4$ $\frac{-18}{-3} - 10 \stackrel{?}{=} -4$ $6 - 10 \stackrel{?}{=} -4$ $-4 = -4$
2	$\frac{2x+1}{3} = 4 \cdot \frac{3}{1}$ $2x+1 = 12$ $2x = 11$ $x = \frac{11}{2}$	CHECK	$\frac{-11x-1}{3} = -4 \cdot \frac{3}{1}$ $-11x-1 = -12$ $-11x = -11$ $x = 1$	CHECK
		$\frac{2x+1}{3} = 4$ $\frac{2 \cdot \frac{11}{2} + 1}{3} \stackrel{?}{=} 4$ $\frac{11+1}{3} \stackrel{?}{=} 4$ $\frac{12}{3} \stackrel{?}{=} 4$ $4 = 4$		$\frac{-11x-1}{3} = -4$ $\frac{-11 \cdot 1 - 1}{3} \stackrel{?}{=} -4$ $\frac{-11-1}{3} \stackrel{?}{=} -4$ $\frac{-12}{3} \stackrel{?}{=} -4$ $-4 = -4$

3	$-3(x - 9) = 39$ $\begin{array}{r} -3x + 27 = 39 \\ -27 \quad -27 \\ \hline -3x = 12 \\ \div 3 \quad \div 3 \\ \hline x = -4 \end{array}$	<p style="text-align: center;">CHECK</p> $\begin{array}{l} -3(x-9) \stackrel{?}{=} 39 \\ -3(-4-9) \stackrel{?}{=} 39 \\ -3(-13) \stackrel{?}{=} 39 \\ 39 = 39 \end{array}$	$\frac{1}{3}(x - 9) = 5$ $\begin{array}{r} \frac{1}{3}x - 3 = 5 \\ \quad \quad \quad +3 \quad +3 \\ \hline \frac{1}{3}x = 8 \\ \cdot \frac{3}{1} \quad \cdot \frac{3}{1} \\ \hline x = 24 \end{array}$	<p style="text-align: center;">CHECK</p> $\begin{array}{l} \frac{1}{3}(x-9) = 5 \\ \frac{1}{3}(24-9) \stackrel{?}{=} 5 \\ \frac{1}{3}(15) \stackrel{?}{=} 5 \\ 5 = 5 \end{array}$
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HOMEWORK

Solve and check, algebraically.

	A		B	
1	$3(r + 1) = 9$	CHECK	$4 = -(z + 11)$	CHECK
2	$6\left(\frac{1}{3} + h\right) = 20$	CHECK	$\frac{4h - 6}{8} = -3$	CHECK

3	$\frac{3a + 4}{5} = 11$	CHECK	$\frac{2w - 3}{9} = 5$	CHECK
4	$\frac{2(h + 12)}{5} = 10$	CHECK	$\frac{2(4t - 7)}{3} = -22$	CHECK

Aim: SWBAT solve and check "Combining Like Terms" equations and "Variables on Both Sides" equations.

#4 Distributive Property and Combining Like Terms Equations

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

#5 Variables on Both Sides Equations

- i. Eliminate a variable term with opposite sign