

12-14-17

Aim: SWBAT eliminate decimals and fractions before solving equations.

HW: Finish WS

Test Tuesday

Do Now: Check hw

Pg. 296 #25-28 ; Pg. 301 #21-24

C.L.T.

$$\textcircled{25} \boxed{5y+8} - \boxed{2y+9y} = -16$$

$$12y + 8 = -16$$

$$\begin{array}{r} -8 \quad -8 \\ \hline 12y = -24 \\ \frac{12y}{12} = \frac{-24}{12} \\ y = -2 \end{array}$$

ck/

$$5y + 8 - 2y + 9y = -16$$

$$5(-2) + 8 - 2(-2) + 9(-2) \stackrel{?}{=} -16$$

$$\begin{array}{r} -10 + 8 - (-4) + (-18) \stackrel{?}{=} -16 \\ -16 = -16 \end{array}$$

C.L.T.

$$\textcircled{26} \boxed{8k-7k-16} - \boxed{3k} = -21$$

$$-2k - 16 = -21$$

$$\begin{array}{r} +16 \quad +16 \\ \hline -2k = -5 \\ \frac{-2k}{-2} = \frac{-5}{-2} \\ k = \frac{5}{2} \end{array}$$

ck/

$$8k - 7k - 16 - 3k = -21$$

$$8\left(\frac{5}{2}\right) - 7\left(\frac{5}{2}\right) - 16 - 3\left(\frac{5}{2}\right) \stackrel{?}{=} -21$$

$$20 - \frac{35}{2} - 16 - \frac{15}{2} \stackrel{?}{=} -21$$

$$20 - 16 - 25 \stackrel{?}{=} -21$$

$$-21 = -21$$

C.L.T.

$$\textcircled{27} 7(t+4) - 3(1+t) = -19$$

$$\boxed{7t+28} - \boxed{3-3t} = -19$$

$$4t + 25 = -19$$

$$\begin{array}{r} -25 \quad -25 \\ \hline 4t = -44 \\ \frac{4t}{4} = \frac{-44}{4} \\ t = -11 \end{array}$$

ck/

$$7(t+4) - 3(1+t) = -19$$

$$7(-11+4) - 3(1+(-11)) \stackrel{?}{=} -19$$

$$7(-7) - 3(-10) \stackrel{?}{=} -19$$

$$-49 - (-30) \stackrel{?}{=} -19$$

$$-19 = -19$$

C.L.T.

$$\textcircled{28} -\boxed{(6-c)} + \boxed{3(2c-7)} = 1$$

$$\boxed{-6+c} + \boxed{6c-21} = 1$$

$$7c - 27 = 1$$

$$\begin{array}{r} +27 \quad +27 \\ \hline 7c = 28 \\ \frac{7c}{7} = \frac{28}{7} \\ c = 4 \end{array}$$

ck/

$$-(6-c) + 3(2c-7) = 1$$

$$-(6-4) + 3(2\cdot 4-7) \stackrel{?}{=} 1$$

$$-(2) + 3(8-7) \stackrel{?}{=} 1$$

$$-2 + 3(1) = 1$$

$$-2 + 3 = 1$$

$$1 = 1$$

Pg. 301

$$\textcircled{21} \quad 3(j+4) = -2j + j$$

$$\begin{array}{r|l} 3j + 12 & = -j \\ -3j & -3j \\ \hline 12 & = -4j \\ -4 & -4 \\ \hline -3 & = j \end{array}$$

ck/ $3(j+4) = -2j + j$
 $3(-3+4) \stackrel{?}{=} -2(-3) + (-3)$
 $3(1) \stackrel{?}{=} 6 + (-3)$
 $3 = 3$

$$\textcircled{22} \quad 5(t+7) = 2(2t+7)$$

$$\begin{array}{r|l} 5t + 35 & = 4t + 14 \\ -4t & -4t \\ \hline t + 35 & = 14 \\ -35 & -35 \\ \hline t & = -21 \end{array}$$

ck/ $5(t+7) = 2(2t+7)$
 $5(-21+7) \stackrel{?}{=} 2(2(-21)+7)$
 $5(-14) \stackrel{?}{=} 2(-42+7)$
 $-70 \stackrel{?}{=} 2(-35)$
 $-70 = -70$

$$\textcircled{23} \quad 2(c+6) = 5(c+12)$$

$$\begin{array}{r|l} 2c + 12 & = 5c + 60 \\ -2c & -2c \\ \hline 12 & = 3c + 60 \\ -60 & -60 \\ \hline -48 & = 3c \\ \frac{-48}{3} & \frac{3c}{3} \\ -16 & = c \end{array}$$

ck/ $2(c+6) = 5(c+12)$
 $2(-16+6) \stackrel{?}{=} 5(-16+12)$
 $2(-10) \stackrel{?}{=} 5(-4)$
 $-20 = -20$

$$\textcircled{24} \quad 6(s-4) = 3(s+9)$$

$$\begin{array}{r|l} 6s - 24 & = 3s + 27 \\ -3s & -3s \\ \hline 3s - 24 & = 27 \\ +24 & +24 \\ \hline 3s & = 51 \\ \frac{3s}{3} & \frac{51}{3} \\ s & = 17 \end{array}$$

ck/ $6(s-4) = 3(s+9)$
 $6(17-4) \stackrel{?}{=} 3(17+9)$
 $6(13) \stackrel{?}{=} 3(26)$
 $78 = 78$

CLEARING FRACTIONS AND DECIMALS FROM EQUATIONS

Tell what number you multiply each side of the equation by to clear the decimals and fractions.

Decimal point moves behind the # <ul style="list-style-type: none"> • 1 place → x 10 • 2 places → x 100 • 3 places → x 1000 		Multiply by the Least Common Denominator (LCD)	
1	$10 (1.5a - 1.2) = 1.8a$ $15a - 12 = 18a$	10	$8 \left(\frac{3}{8}m + \frac{7}{8} \right) = 2m$ $3m + 7 = 16m$
2	$100 (0.5c + 3.49 - 2c) = 4$ $50c + 349 - 200c = 400$	11	$15 \left(\frac{-4}{15}n + \frac{2}{3} \right) = \frac{2}{5}n$ $-4n + 10 = 6n$
3	$10 (1.5s - 1.2 - s) = 0.5$ $15s - 12 - 10s = 5$	12	$20 \left(-\frac{1}{5}p + \frac{3}{4} \right) = 11$ $-4p + 15p = 220$
4	$4.93 - 9.2v = 0.66v$	13	$\frac{3}{10} - w = \frac{4}{5} - \frac{3}{5}w$
5	$5.85b = 8.68 + 3.68b$	14	$\frac{3}{4} - \frac{1}{2}b = -3b$
6	$r + 8.2 + 0.4r = -8.6$	15	$p - \frac{4}{9}p = -\frac{7}{9}$
7	$5.3 + u = 3.2u - 2.7$	16	$\frac{1}{6}x + \frac{2}{3}x = 1$
8	$7.6a + 9.6 = 1.2a$	17	$\frac{7}{4}z - \frac{1}{6} = \frac{17}{6} + \frac{3}{4}z$
9	$-4.42x + 0.9 = -9.07 - 0.432x$	18	$6\frac{4}{5}n - \frac{8}{9} = \frac{7}{15}n$