

01-03-18

Aim: SWBAT clear decimals and fractions from inequalities.

HW: Pg. 305 # 21, 23 - 25 (clear only)

Pg. 320 # 22 - 25 (clear only)

Pg. 157 # 30 - 36 & Pg. 320 # 1 - 17 (due tomorrow)

Test Friday

Do Now: Correct hw

Name _____

Date _____

Period _____

Solving Inequalities

<p>R</p> $\frac{-1 < -x}{-1 \quad -1}$ $1 > x$	<p>R</p> $\frac{-2x \leq -4}{-2 \quad -2}$ $x \geq 2$	<p>R</p> $-5 \cdot \frac{-x}{5} \geq -3 \cdot -5$ $x \leq 15$	<p>R</p> $\frac{-8 \cdot \frac{x}{-8} > 2 \cdot -8}{-8 \quad -8}$ $x < -16$
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Solve and graph.

<p>R</p> $\frac{x+1 < -6}{-1 \quad -1}$ $x < -7$	<p>R</p> $\frac{-2x+1 \leq -4}{-2 \quad -2}$ $x \geq -\frac{5}{2}$	<p>R</p> $\frac{\frac{x}{5}+1 \geq -3}{-5 \quad -5}$ $x \geq -20$	<p>R</p> $\frac{2x+3x-1 \leq -4}{5 \quad +1}$ $5x-1 \leq -4$ $5x \leq -3$ $x \leq -\frac{3}{5}$	<p>R</p> $\frac{2(x-1) \leq -4}{2 \quad +2}$ $2x-2 \leq -4$ $2x \leq -2$ $x \leq -1$
<p>R</p> $\frac{x-1 < -6}{+1 \quad +1}$ $x < -5$	<p>R</p> $\frac{2x-1 \leq -4}{2 \quad +1}$ $2x \leq -3$ $x \leq -\frac{3}{2}$	<p>R</p> $\frac{\frac{-x}{5}-1 \geq -3}{-5 \quad -5}$ $-x-1 \geq -3$ $-x \geq -2$ $x \leq 2$	<p>R</p> $\frac{2x-3x-1 \leq -4}{-1 \quad +1}$ $-x-1 \leq -4$ $-x \leq -3$ $x \geq 3$	<p>R</p> $\frac{-2(x-1) \leq -4}{-2 \quad -2}$ $-2x+2 \leq -4$ $-2x \leq -6$ $x \geq 3$

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 #		Multiply by the Least Common Denominator (LCD)	
<ul style="list-style-type: none"> • 1 place \rightarrow $\times 10$ • 2 places \rightarrow $\times 100$ • 3 places \rightarrow $\times 1000$ 			
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	$100 (4.93 - 9.2v) = 0.66v$ $493 - 920v = 66v$	13	$10 \left(\frac{3}{10} - w \right) = \frac{4}{5} - \frac{3}{5}w$ $3 - 10w = 8 - 6w$
5	$100 (5.85b) = 8.68 + 3.68b$ $585b = 868 + 368b$	14	$4 \left(\frac{3}{4} - \frac{1}{2}b \right) = -3b$ $3 - 2b = -12b$
6	$10 (r + 8.2 + 0.4r) = -8.6$ $10r + 82 + 4r = -86$	15	$9 \left(p - \frac{4}{9} \right) = \frac{7}{9}$ $9p - 4p = -7$
7	$10 (5.3 + u) = 3.2u - 2.7$ $53 + 10u = 32u - 27$	16	$6 \left(\frac{1}{6}x + \frac{2}{3} \right) = 1$ $x + 4x = 6$
8	$10 (7.6a + 9.6) = 1.2a$ $76a + 96 = 12a$	17	$12 \left(\frac{7}{4}z - \frac{1}{6} \right) = \frac{17}{6} + \frac{3}{4}z$ $21z - 2 = 34 + 9z$
9	$1000 (-4.42x + 0.9) = -9.07 - 0.432x$ $-4420x + 900 = -9070 - 432x$	18	$45 \left(\frac{4}{5}n - \frac{8}{9} \right) = \frac{7}{15}n$ $306n - 40 = 21n$

Clear.

$$\begin{array}{l} \overset{12}{\curvearrowright} \left(\frac{2}{3}x + \frac{4}{3} - \frac{3}{4}x \right) < \overset{12}{\curvearrowright} \left(-\frac{3}{4} \right) \\ 8x + 16 - 9x < -9 \end{array}$$

$$3 \overline{)4} \quad \times$$

$$3 \overline{)8} \quad \times$$

$$3 \overline{)12} \\ \text{LCD}$$

Clear.

$$1000(0.05a + 9.367 - 1.65a) \leq 1000(4.183)$$

$$50a + 9367 - 1650a \leq 4183$$