4-4B, 4-4C, Lesson 9: Solving Inequalities with Rationals 11-4-15

Remember: 1) Solve using inverse operations to isolate the variable
2) Use order of operations backwards → Add/Subtract then multiply/divide
3) When multiplying or dividing BOTH sides by a negative → FLIP the sign!!
4) Use integer, decimal, and fraction rules when applicable

Ex 1: Solve and graph.

A) $\frac{2}{3}x - 37.8 \geq 12.2$

$+37.8 \quad +37.8$

$\frac{3}{2} \cdot \frac{2}{3}x \geq 50 \cdot \frac{3}{2}$

$x \geq 75$

B) $4\frac{5}{8} > -\frac{1}{4} - 2y$

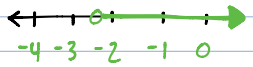
$\frac{37}{8} > -\frac{2}{8} - 2y$

$+\frac{2}{8} \quad +\frac{2}{8}$

$-\frac{1}{2} \cdot \frac{39}{8} > \frac{-2y}{1} \cdot -\frac{1}{2}$

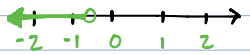
$-\frac{39}{16} < y$

$y > -2\frac{7}{16}$



C) $\frac{9z}{9} < \frac{-7.2}{9}$

$z < -0.8$



$9\overline{)7.2}$ → 0.8, -72, 0

HW: Inequalities Extra Practice WS