Name_____ Pd_____ Date_____ **Section 1.D.5**

Inequalities with Fractions

Ex. 1	Summary for Ex. 1	You Try 3
$$\frac{3}{4}x > -6$$	What do you do to both sides? Reverse symbol? Why/why not?	$$-\frac{2}{5}h \le -4$$

Ex. 2	Summary for Ex. 2	You Try 4
$$\frac{3y-2}{-4} \ge -1$$ How else could we write this?	What do you do to both sides? Reverse symbol? Why/why not? What property do you use when you solve, if you solve this way?	$$\frac{2x+7}{3} > -5$$

Multi-Step Inequalities

Ex. 5	Summary for Ex. 6
$$2x - 3(3x+2) < 8$$ $$2x - 9x - 6 < 8$$ $$-7x - 6 < 8$$ $$\underline{+6 \quad +6}$$ $$\frac{-7x}{-7} < \frac{14}{-7}$$ $$x > -2$$	1) What simplify process do you do first? Next? 2) What inverse operations do you use to isolate the variable? 3) Reverse symbol? Why or why not?

Ex. 6	You Try 7
$$2 \le 3x - 5(x-2)$$	$$2(x+3) - 4 > 8$$

Find the Errors
- A student solved these inequalities but made two errors in each problem.
- Find the errors and EXPLAIN IN WORDS what the student should do instead.

$$\frac{3}{2}x + \frac{7}{2} > 5$$ $$2\left(\frac{3}{2}x + \frac{7}{2}\right) > 5(2)$$ $$6x + 14 > 10$$ $$\underline{-14 \quad -14}$$ $$\frac{6x}{6} > \frac{4}{6}$$ $$x > \frac{2}{3}$$	
$$5x - 3(2x + 5) \leq -1$$ $$5x - 6x + 15 \leq -1$$ $$1x + 15 \leq -1$$ $$\underline{-15 \quad -15}$$ $$1x \leq -16$$ $$x \leq -16$$	

Write the correct solutions for the two problems above.

8) $\frac{3}{2}x + \frac{7}{2} > 5$

9) $5x - 3(2x + 5) \leq -1$