

Name _____

Date _____

Extra Practice (Inequalities)

Algebra RH

Complete each question below. Show all work on a separate sheet of paper. You may use a calculator.

For #'s 1 – 5, solve each simple inequality and graph the solution set on a number line. State the solution in interval notation.

1. $15x - 2 < 58$ 2. $4 - \frac{5}{8}x \geq -6$ 3. $7x + 3 > 4x + 15$ 4. $14 - (9x - 2) \leq -x + 30$

5. $8 - 3(4x - 1) > -49$

For #'s 6 – 10, solve each compound inequality and graph the solution set on a number line.

6. $2x > -6$ and $x - 1 < 0$ 7. $3x - 1 \leq -7$ or $4x + 9 \geq 13$ 8. $-5x > 15$ or $x - 5 > -6$

9. $8 < 8 - \frac{1}{3}x < 9$ 10. $4x + 5 < x - 1 \geq 2x + 6$

For #'s 11 – 13, read each problem, set up an inequality and solve. Be sure to define all unknowns.

11. For lunch, Tonya has a hamburger and potato chips. The hamburger has 380 calories and each chip contains 12 calories. How many chips can Tonya eat if she wants to consume no more than 600 calories?
12. A piece of land is shaped like an isosceles triangle. The base is 3 times as long as each of the other sides. The perimeter is no more than 400 feet. What are the maximum whole number lengths for the sides of the triangle?
13. Yellow Cab Company charges \$3 for the 1st mile and \$0.80 for each additional mile. The Green Cab Company charges a flat rate of \$1 per mile. How many miles must be driven for Yellow Cab to be cheaper than Green Cab?