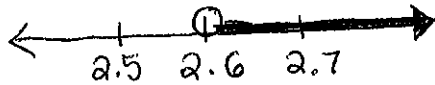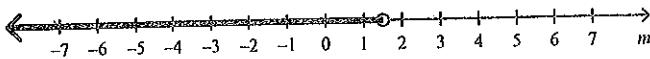Name: *Key* Class: _____ Date: _____

Algebra 1 Chapter 3, Sections 1-4 Quiz REVIEW

Directions: *Answer each question by showing your work. STUDY this review in preparation for your quiz.*
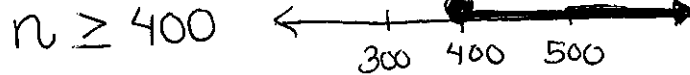
1. Graph the inequality $n > 2.6$.

2. Write the inequality shown by the graph.

$$x < 1.5$$

3. To join the school swim team, swimmers must be able to swim at least 400 yards without stopping. Let n represent the number of yards a swimmer can swim without stopping. Write an inequality describing which values of n will result in a swimmer making the team. Graph the solution.

$$n \geq 400$$

4. Solve the inequality $a + 5.5 \leq 2.5$ and graph the solutions.

$$-5.5 \quad -5.5$$

$$a \leq -3$$
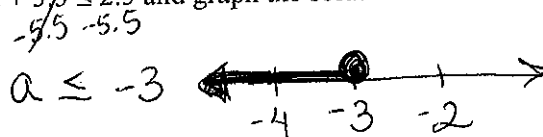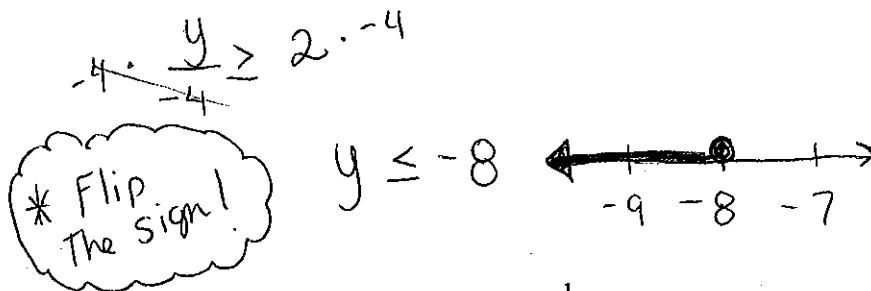

5. Solve the inequality. $\frac{m}{7} < 2$ and graph the solutions.

$$m < 14$$
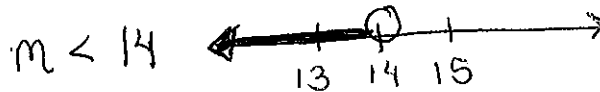
6. Solve the inequality $-2z < 4$ and graph the solutions.

$$\frac{-2 \quad -2}{}$$

Flip the sign!

$$z > -2$$
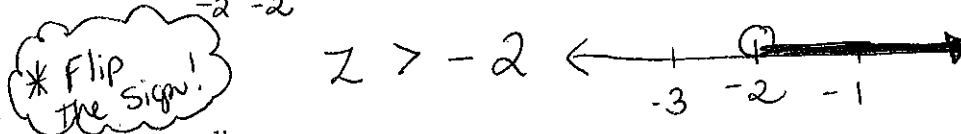
7. Solve the inequality $\frac{y}{-4} \geq 2$ and graph the solutions.

$$-4 \cdot \frac{y}{-4} \geq 2 \cdot -4$$

Flip the sign!

$$y \leq -8$$

Name: _____

8. Solve the inequality $-4y \leq 28$ and graph the solutions.

$$\frac{-4}{-4} \quad \frac{-28}{-4}$$

*Flip the sign!

$y \geq -7$

9. Salar's Drama class is performing a play. He wants to buy as many tickets as he can afford. If tickets cost $2.75 each and he has $11.75 to spend, how many tickets can he buy?

$$\frac{2.75x}{2.75} \leq \frac{11.75}{2.75} \qquad x \leq 4.27$$

He can buy 4 tickets or less

10. Solve the inequality $-d - 5 > 2$ and graph the solutions.

*Put a "1" in front of d

$$+5 \ +5$$

$$-d > 7 \longrightarrow \frac{-1d}{-1} > \frac{7}{-1} \qquad d < -7$$

*Flip The sign

11. Solve the inequality $4f - 9 - 2f < 1$ and graph the solutions.

$$2f - 9 < 1 \qquad \frac{2f}{2} < \frac{10}{2} \qquad f < 5$$
$$\quad +9 \ +9$$

12. A family travels to Bryce Canyon for three days. On the first day, they drove 130 miles. On the second day, they drove 210 miles. What is the least number of miles they drove on the third day if their average number of miles per day was at least 200?

$$\frac{130 + 210 + x}{3} \geq 200$$

(see bottom *)

Day	Miles
1	130
2	210
? 3 ?	x

13. Solve the inequality $6x < 2x + 8$ and graph the solutions.

$$-2x \ -2x$$

$$\frac{4x}{4} < \frac{8}{4} \qquad x < 2$$

14. Mrs. Williams is deciding between two field trips for her class. The Science Center charges $315 plus $5 per student. The Dino Discovery Museum simply charges $12 per student. For how many students will the Science Center charge less than the Dino Discovery Museum?

Science Center $= 315 + 5x$

Discovery museum $= 12x$

$$315 + 5x < 12x$$
$$-5x \qquad -5x$$

$$\frac{315}{7} < \frac{7x}{7}$$

$$45 < x \longrightarrow \boxed{45 \text{ students}}$$

15. Solve $3.25 + 1.75x \geq -0.75 + 2.25x$.

$$-2.25x \qquad -2.25x$$

$$-.5x + 3.25 \geq -.75 \qquad -.5x \geq -1.75 \qquad x \leq 3.5$$
$$-3.25 \quad -3.25 \qquad \frac{-.5x}{-.5} \geq \frac{-1.75}{-.5}$$

*Flip the sign

16. Solve the inequality $-4(z + 9) \geq -4z - 2$.

$$-4z + -36 \geq -4z - 2$$
$$+4z \qquad +4z$$

$$-36 \geq -2 \text{ False}$$

$$= \boxed{\text{No Solution}}$$

* $$\frac{130 + 210 + x}{3} \geq 200 \cdot 3$$

$$130 + 210 + x \geq 600$$

$$340 + x \geq 600$$
$$-340 \qquad -340$$

$$\boxed{x \geq 260 \text{ miles}}$$