Algebra 2: Homework 4

In 1 – 4, solve each inequality and graph its solution set on a number line.

1. $4 \le 2x < 8$

2. $(2m \ge -2) \wedge (-3m > -1)$

3. $(3(x-2) < 9) \vee (3(x-2) > 15)$

4. $2x - 3 < 5 \le 2 - 3x$

5. True or False: Every rational number is a real number.

6. True or False: Every repeating decimal represents a rational number.

In 7 – 9, list the elements of each solution set, or indicate that the solution set is the empty set.

7. $\{x | x \le 0 \text{ and } x \in \text{whole numbers}\}$

8. $\{y | 2 < y \le 4 \text{ and } y \in \mathbb{N}\}$

9. $\{x | 4x = 6 \text{ and } x \in \mathbb{Z}\}$