

Name: _____ Date: _____

1. Determine which numbers in the set are irrational numbers.

$$4.444\dots, \frac{\sqrt{82}}{9}, 0, -\frac{14\pi}{5}, \sqrt{4}, -9.080880888\dots, -6\pi$$

2. Determine which numbers in the set are rational numbers.

$$-9.7979\dots, -8, \frac{6}{7}\pi, \sqrt{26}, -\frac{9}{5}, -9.020020002\dots, \sqrt{9}$$

3. Determine which numbers in the set are integers.

$$-9.51, 13, 6\pi, 0, 3.0, -8$$

4. Determine which numbers in the set are whole numbers.

$$9, -18, 0, \frac{15}{3}, -10, 16, \frac{14}{15}$$

5. Determine which numbers in the set are natural numbers.

$$-13, 12, 2, \sqrt{36}, 0, -15, \sqrt{50}$$

6. Give a verbal description of the subset of real numbers represented by the inequality.

$$-6 < x < 2$$

- A) all real numbers less than -6 and greater than 2
- B) all real numbers between -6 and 2 not including -6 or 2
- C) all real numbers between -6 and 2 , including -6 but not including 2
- D) all real numbers between -6 and 2 , including 2 but not including -6
- E) all real numbers between -6 and 2 , including -6 and 2

7. Give a verbal description of the subset of real numbers represented by the interval.

$[-1, 0)$

- A) all integers between -1 and 0 , including -1 but not including 0
- B) all integers between -1 and 0 , including 0 but not including -1
- C) all real numbers between -1 and 0 , including -1 but not including 0
- D) all real numbers between -1 and 0 , including 0 but not including -1
- E) all real numbers between -1 and 0 , including -1 and 0

8. Draw the graph that matches the inequality below.

$$-5 < x \leq 7$$

9. Sketch the graph that represents the interval below.

$(-\infty, -9]$

10. Use inequality notation to describe the set.

p is positive

11. Use inequality notation to describe the set.

w is at least 0 but less than 1

12. Use inequality notation to describe the set.

all t in the interval $[5, 21]$