Interval Notation Assignment   name _____ date _____ per ___

1. Use inequality, graphical, and interval notation on the table that follows to write the set of numbers that are:

   a. between -5 and 6, not including the endpoints.

Inequality Notation	Graphical Notation	Interval Notation	Type of Interval

   b. less than 1.5.

Inequality Notation	Graphical Notation	Interval Notation	Type of Interval

   c. greater than or equal to -5.

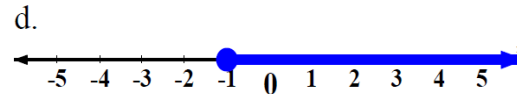 | Inequality Notation | Graphical Notation | Interval Notation | Type of Interval |
   |---|---|---|---|
   | | | | |

   d. between -4 and 0, including the endpoints.

Inequality Notation	Graphical Notation	Interval Notation	Type of Interval

   e. including -3.5, but excluding 2.

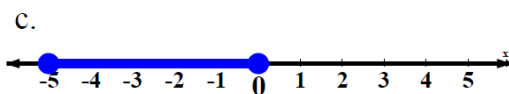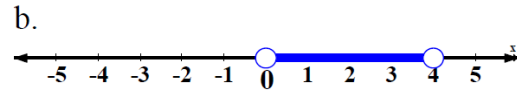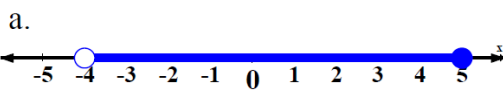 | Inequality Notation | Graphical Notation | Interval Notation | Type of Interval |
   |---|---|---|---|
   | | | | |

2. Write the given graphical intervals in interval notation.

   a.

   b.

   c.

   d.

   e.

   f.
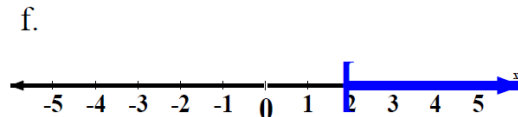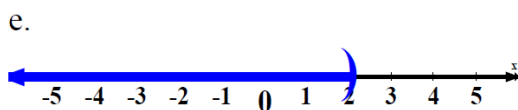
3. Write the given intervals in inequality notation.

    a. [-5, 8)

    b. (1, 4)

    c. (0, 9.5]

    d. (-∞, 30)

    e. [0, 18.3]

    f. [1/2, ∞)

4. Missy was asked to write $x > -9$ in interval notation. Her answer was (-9, ∞] but her instructor marked it wrong. Explain why.

5. For example, in order to enlist in the military, you must be at least 17 years old and younger than 35. As an inequality, it would be written like this: $17 \le x < 35$ In interval notation, that would be written like this: [17, 35), a half-open interval.

Your final task for this assignment is to write a real-life problem that can be described in which the solution can be described in interval notation, then express the situation in interval notation.
Suggestions: percentage grade required to get a certain letter grade, the elevation of anything on the 4th floor of a building, the amount of gas in a tank before the fuel warning light turns on, etc.