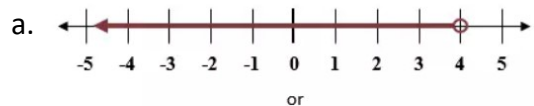


### Learning Activity – Section 1.4 – Interval Notation, Union and Intersection of Sets

Names: \_\_\_\_\_

\_\_\_\_\_

1. For each graph, write the interval notation.



Answer (a):



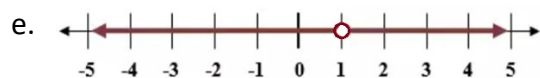
Answer (b):



Answer (c):



Answer (d):



Answer (e):

2. Write each collection of numbers in set-builder notation, sketch the set on a number line, and write the set in interval notation.

a.  $x > -18$

b.  $-\frac{1}{8} < x \leq \frac{3}{2}$



set-builder notation:

interval notation:



set-builder notation:

interval notation:

3. Given the sets of real numbers defined by the intervals, find the union or intersection as indicated. Write the answer in interval notation.

a.  $[-16,12) \cap (11,18)$

b.  $(-\infty,0) \cup \left(-\frac{1}{3},\infty\right)$

c.  $(-62,-3) \cap [-3,\infty)$

d.  $(-\infty,5] \cup (0,5)$

e.  $[-2,4] \cap [4,\infty)$