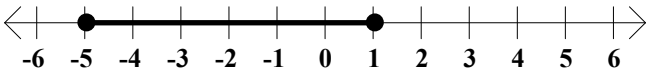
General Algebra II Worksheet #3 Unit 1 page 1 _____

For each of the following graphs, (a) write an appropriate inequality and (b) represent the graph using interval notation.

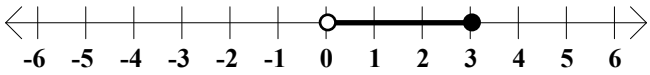
1. (a) _____

(b) _____



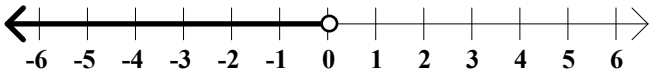
2. (a) _____

(b) _____



3. (a) _____

(b) _____



4. (a) _____

(b) _____

For each of the following intervals, (a)write an appropriate inequality, (b) tell whether it is bounded or unbounded, and (c) sketch its graph.

5. [-2 , 3]

(a) _____

(b) _____

(c)

6. [3 , ∞)

(a) _____

(b) _____

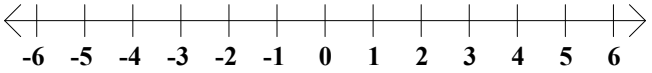
(c)

7. [2 , 5)

(a) _____

(b) _____

(c)

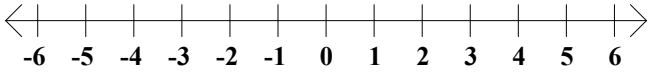


8. (-∞ , -2)

(a) _____

(b) _____

(c)

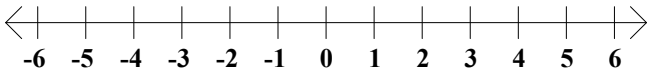


General Algebra II Worksheet #3 Unit 1 page 2

Solve each of the following inequalities. Then express the solution set using interval notation and sketch its graph. (Show your work neatly organized.)

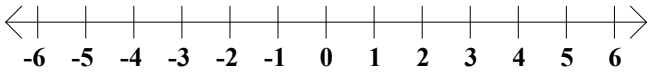
9. $5x + 4 \leq 14$

10. $3x - 7 > 2$



11. $-4x + 1 \leq 13$

12. $-5x - 3 > 2$

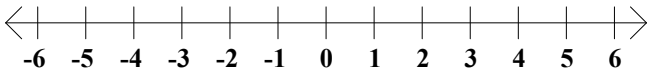


13. $3x + 5 \geq 10$

14. $4x - 1 < 5$

15. $-2x + 6 \geq 11$

16. $-6x - 5 < 5$

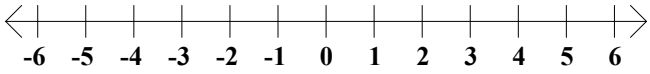


General Algebra II Worksheet #3 Unit 1 page 3

Express each of the following as a single interval. The number lines are included to help.

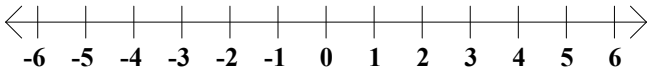
17. $[-2, 5) \cap (0, 6] =$ _____

18. $[-2, 5) \cup (0, 6] =$ _____



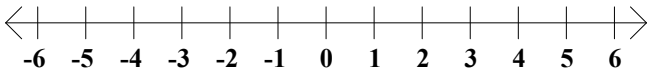
19. $(-\infty, 2] \cap (-1, \infty) =$ _____

20. $(-\infty, 2] \cup (-1, \infty) =$ _____



21. $[0, \infty) \cap (-3, \infty) =$ _____

22. $[0, \infty) \cup (-3, \infty) =$ _____



23. $(-\infty, 3) \cap [4, 6] =$ _____