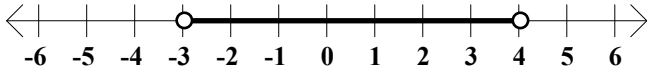


General Algebra II Worksheet #4 Unit 1 page 1 _____

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

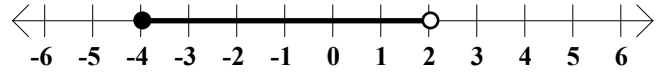
1. (a) _____

(b) _____



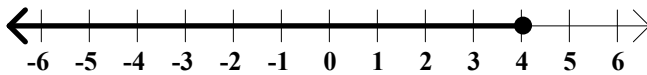
2. (a) _____

(b) _____



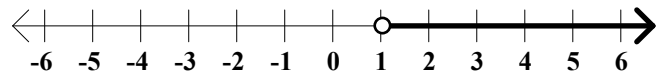
3. (a) _____

(b) _____



4. (a) _____

(b) _____



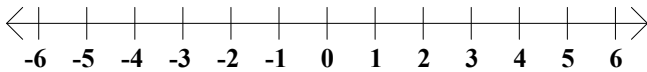
For each of the following intervals, (a) write an appropriate inequality, (b) tell whether it is bounded or unbounded, and (c) sketch its graph.

5. $(1, 5)$

(a) _____

(b) _____

(c)

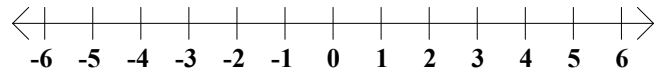


6. $(-\infty, 4]$

(a) _____

(b) _____

(c)

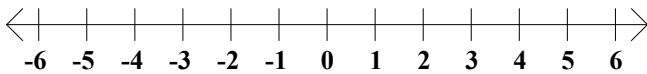


7. $(3, \infty)$

(a) _____

(b) _____

(c)

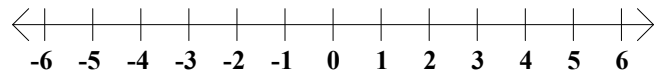


8. $[-3, 2)$

(a) _____

(b) _____

(c)

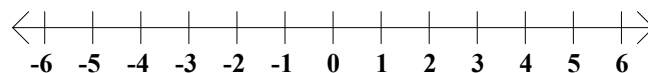
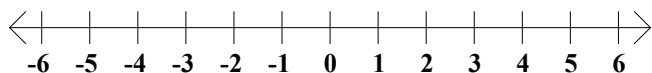


General Algebra II Worksheet #4 Unit 1 page 2

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

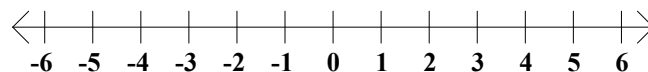
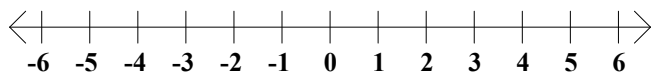
9. $3x + 5 \geq 10$

10. $4x - 1 > 5$



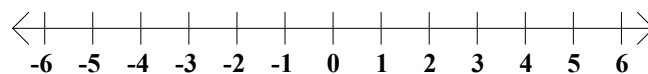
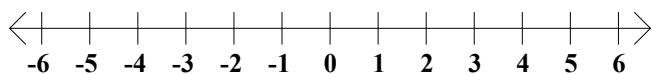
11. $-8x - 10 < 10$

12. $4(2x + 3) + 3(x - 4) \leq 3 + 4(2x - 3)$



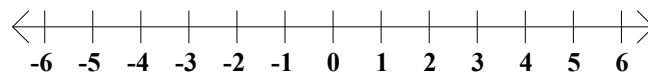
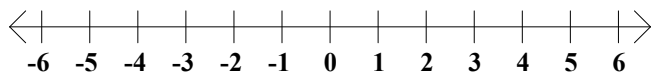
13. $3(2x + 1) + 5(x - 3) > 5x + 6$

14. $5(3x + 1) - 2(3x - 5) < 6$



15. $2(5x - 3) - 4(3x - 5) \geq 10$

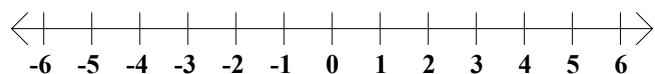
16. $2(5x - 1) + 3(x - 5) \geq 6(3x - 2) - 5(4x - 3)$



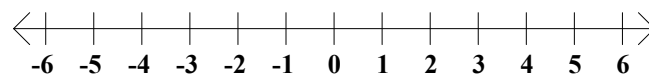
General Algebra II Worksheet #4 Unit 1 page 3

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

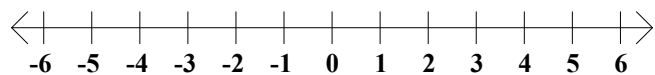
17. $(-5, 2) \cap [-2, 4] =$ _____



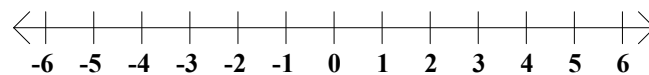
18. $[-4, -1] \cup (-3, 3) =$ _____



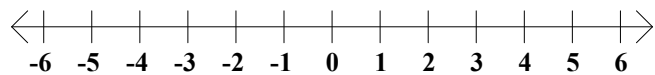
19. $[-4, \infty) \cap (-\infty, 0] =$ _____



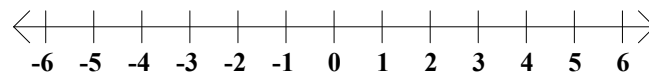
20. $(-5, \infty) \cup (-\infty, 4) =$ _____



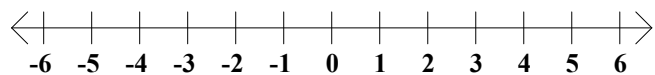
21. $(-\infty, 1) \cap (-\infty, -2] =$ _____



22. $[-3, \infty) \cup (2, \infty) =$ _____



23. $[-3, 2] \cap (3, \infty) =$ _____



24. $(-1, 2) \cup [-3, 4] =$ _____

