

General Algebra II Review Unit 1 page 1 _____

Solve each of the following equations. Express all fractions in lowest terms. Show your process neatly organized.

1. $8x + 3 = 15$

2. $6x - 7 = 7$

3. $9x + 5 = 5x + 2$

4. $11x - 8 = 2x - 5$

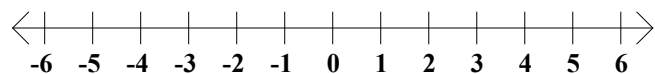
5. $5(x - 7) + 3(2x + 15) = 5$

6. $8(5x + 3) - 5(3x + 6) = 9$

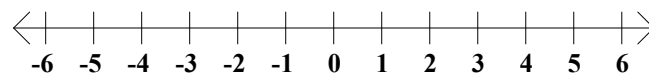
General Algebra II Review Unit 1 page 2

Write an inequality for each of the following intervals and sketch its graph.

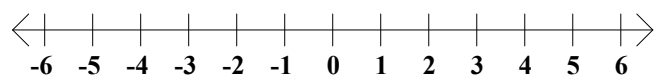
7. $[-5, -1]$ _____



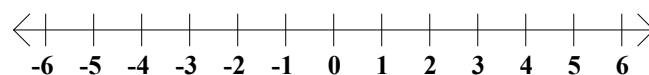
8. $(-\infty, 3]$ _____



9. $(2, \infty)$ _____

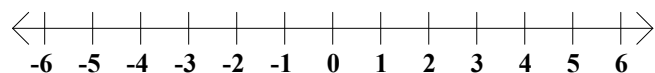


10. $[0, 4)$ _____

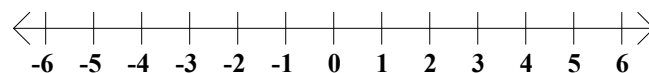


Use interval notation to describe the solution set of each of the following inequalities and sketch its graph.

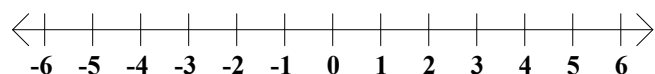
11. $x \geq 3$ _____



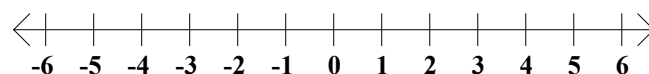
12. $-3 < x < 1$ _____



13. $x < 0$ _____



14. $0 \leq x \leq 3$ _____

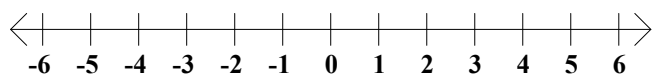
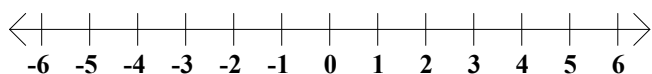


General Algebra II Review Unit 1 page 3

Solve each of the following for x . Write the solution set using interval notation and sketch its graph.

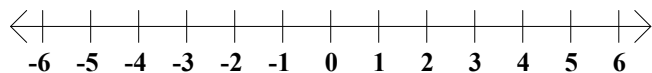
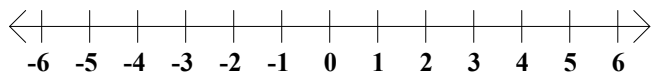
15. $5(3x + 1) + 3(x - 7) > 2$

16. $6(3x - 2) + 2(x + 3) < 34$



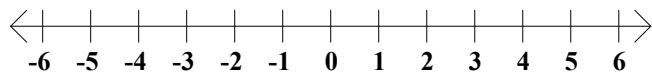
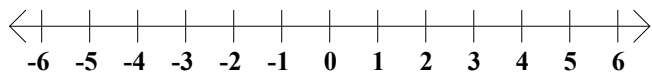
17. $2(7x + 4) - 4(5x + 3) \leq 2$

18. $-5(3x + 1) + 2(5x + 10) \geq 0$



19. $-5 < 3x + 2 < 4$

20. $-3 \leq 4x - 3 \leq 7$

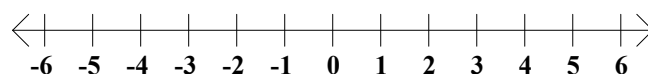
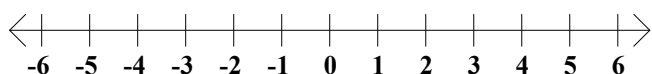


General Algebra II Review Unit 1 page 4

Solve each of the following for x . Write the solution set as an interval or the union of intervals and sketch its graph.

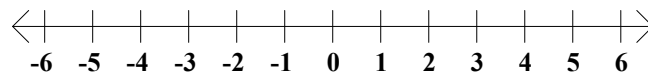
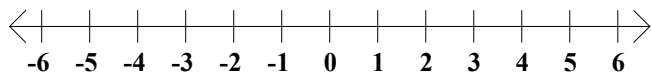
21. $2x + 7 < 9$ and $-3x + 9 < 21$

22. $4x - 10 \leq 6$ and $2x - 1 \leq 15$



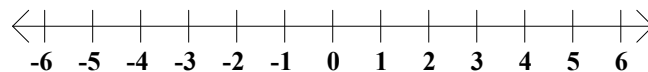
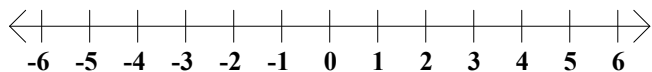
23. $-6x - 9 \leq 15$ and $x + 6 \leq 0$

24. $-2x + 1 > 1$ or $5x - 8 > 2$



25. $x - 7 > -1$ or $5 - 2x < 9$

26. $6x - 3 \geq 9$ or $4x - 6 \leq 14$



General Algebra II Review Unit 1 page 5

Solve each of the following problems algebraically (one variable solutions please).

27. Tom, Dick, and Harry win a total of \$500. Tom wins \$10 less than 3 times the amount Harry wins. Dick wins \$30 more than twice the amount Harry wins. How much did each person win?

28. Find four consecutive odd integers whose sum is 136.

General Algebra II Review Unit 1 page 6

Solve each of the following problems algebraically (one variable solutions please).

29. A collection of ordinary nickels, dimes, and quarters is worth a total of \$15. The number of nickels is 5 less than 3 times the number of dimes, and the number of quarters is 3 less than the number of dimes. How many of each are in the collection?

30. The length of a rectangle is 6 inches less than twice the width. Find the dimensions of the rectangle if its perimeter is 13 feet. Express the answers in feet and inches.