Unit 1 Summative Review Part 1

Write the equation **in standard form** of the line parallel and line perpendicular to given line through given point.

	Parallel	Perpendicular

1) $y = 4x + 7$ $(-2, -9)$ _____ _____

2) $2x - 5y = 10$ $(3, -7)$ _____ _____

3) $3x + 4y = 16$ $(12, -5)$ _____ _____

State if the lines are Parallel, Perpendicular, or Neither

4) $6x - 12y = 24$

  $4x + 2y = 8$

5) $4x + y = 5$

   $3x + 12y = -6$

6) $-2x + 7y = 14$

   $4x = 14y$

7) Write the equation of a vertical line through (-3, 0).

8) Write the equation of a horizontal line through (0. 8).

Find the coordinates of the midpoint of the segment joining the given points.

9. (0, 2) and (6, 4)

10. (-2, 2) and (6, 4)

11. (6,-7) and (-6, 3)

12. (-11, 3) and (8,-7)

Find the distance between the two points.

13. (-4, 2) and (2,-1)

14. (-2, -3) and (-2, 4)

15. (3, 2) and (5, -2)

16. (5, -7) and (8,-2)

Solve the absolute value inequality and graph the solutions.

17. $|3 - 2x| < 5$

18. $|2x + 1| > -3$

19. $|-9x| = 64$

20. $|-7x + 4| = 18$

21. $3|4z - 1| - 5 = 10$

22. $|2x - 3| = 4x - 1$

23. Jose left the White House and drove toward the recycling plant at an average speed of 40 km/h. Rob left some time later driving in the same direction at an average speed of 48 km/h. After driving for five hours Rob caught up with Jose. How long did Jose drive before Rob caught up?

24. A submarine left Hawaii two hours before an aircraft carrier. The vessels traveled in opposite directions. The aircraft carrier traveled at 25 mph for nine hours. After this time the vessels were 280 mi. apart. Find the submarine's speed.

25. A car is normally priced at $12000. In anticipation of their Labor Day Sale, the dealership raises the price of the car by 15%, and then puts the car on sale from that price at 15% off. What is the sale price of the car?

26. Mrs. Margul paid $125 to have her hair colored and cut. If she tips her hairdresser 15%, what is her total bill?

27. Find the domain and range. Give your answer using interval notation.