Test 1 Math 1010 (10 pts total), Name: _____

Short Answer. (2 points each)

1) _____ Give the slope of the line $x = -2$.

2) _____ Give the solution set of the inequality $|m| < 0$.

3) _____ . Give the x and y intercepts of the line $8y - 2x = -6$.

4) _____ . If $f(x) = x^2 - 2x + 1$, find $f(2)$.

5) _____ . Write as an algebraic equation. When 50% of a number is subtracted from 70, the result is 2 less than the number.

SHOW ALL WORK ON REMAINING PROBLEMS.

Solve the equation. (6 points)

6) $\frac{-3x+7}{4} + \frac{1}{2} = -\frac{2x}{3}$

Give the solution set for the following equation. (6pts)

7) $5(4g + 36) - 20g - 180 = 0$

Solve the equation for the specified variable. (8 points)

8) $w = \frac{6y-x}{y}$ for y

Write an algebraic equation for problems 9 and 10, then solve each of the problems. (8 points each)

9) In a chemistry class, 5 liters of a 4% silver iodide solution must be mixed with a 10% solution to get a 6% solution. How many liters of the 10% solution are needed?

10) Tom traveled 290 miles east of Salt Lake City. For most of the trip, he averaged 70 mph, but for one period of time he was slowed to 20 mph due to a major accident. If the total time of travel was 7 hours, how many miles did he drive at the reduced speed?

Solve the inequality, and then graph the solution set. (6 points)

11) $-26 < -5y + 4 \leq -6$

For the compound inequality, give the solution set in both interval and graph forms. (6 points)

12) $x < 2$ or $x < 8$

Solve the inequality. State the solution set in interval notation. (8 points)

13) $|5 - x| + 2 \geq 8$

Write an equation of the line passing through the points. (6 points)

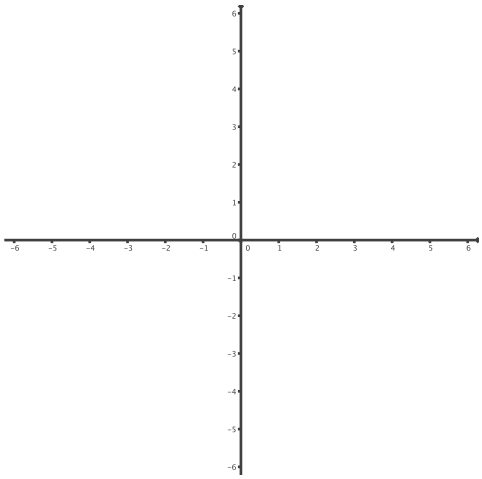
14) $(5, -7)$ and $(0, 4)$

Write an equation in slope-intercept form of the line described. (8 points)

15) Through $(-5, -2)$; perpendicular to $-5x - 2y = 27$

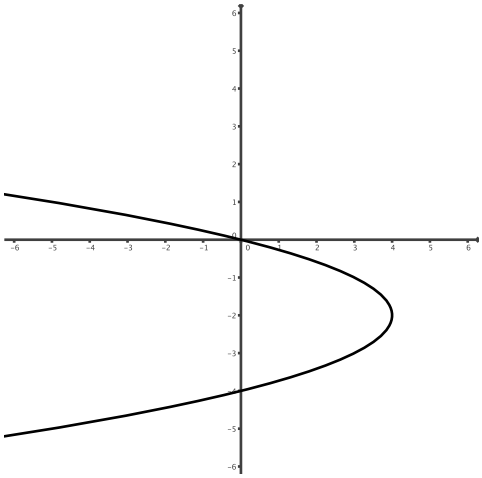
Graph the solution set to the system of inequalities. (8 points)

16) $2x - 4y > 4$ and $x \leq 4$



Determine if the graph is that of a function. State the domain and range. (6 points)

17) Function: Yes or No (circle one)



Write an algebraic equation, then solve the problem. (6 points)

18) The intensity of light varies inversely as the square of the distance from the source. If the intensity of illumination on a screen 5 ft from a light is 4 foot candles, find the intensity on a screen 20 ft from the light.