GRAPHING

Place your answer in the appropriate blank on the answer sheet provided. Only the answer sheet will be graded. All problems are in real numbers and in 2-space. Write each answer in exact form and simplified.

For problems #1-4, use the equation $2x - 5y = -3$.

1. What is the value of x if $y = -2$.

2. Find the y-intercept of the line.

3. Find the x-intercept of the line.

4. Find the slope of the line.

For problems #5-8, use the ordered pairs A(-1, 3) and B(5, -4).

5. Find the distance from A to B.

6. Find the midpoint of $\overline{AB}$.

7. Find the slope of the line through A and B.

8. Find the equation of the line (in slope-intercept form) through point A and perpendicular to $\overleftrightarrow{AB}$

9. The ordered pair (1, 5) is the midpoint of $\overline{CD}$. Find the coordinates of D if the coordinates of C are (3, 8).

10. Find the equation of the line through (-3, 5) and parallel to the x-axis.

11. Two lines, L_1 and L_2, are parallel. If the slope of L_1 is 8, what is the slope of L_2?

12. Two lines, L_1 and L_2, are perpendicular. If the slope of L_1 is 8, what is the slope of L_2?

13. Write the equation of the line (in slope-intercept form) with an x-intercept of 4 and a y-intercept of -2.

14. Find all of the intercepts (in ordered pair form) for the graph of
$y = -2x^2 + 10x + 28$

15. Find all of the intercepts (in ordered pair form) for the graph of
$y = x^3 - 2x^2 + 4x - 8$

16. Find the point(s) of intersection (in ordered pair form) for the graphs of
$3x - 4y = 11$ and $2x + 3y = -4$.

17. Find the points(s) of intersection (in ordered pair form) for the graphs of
$x - y = 5$ and $y = x^2 - 6x + 5$.

18. Find the vertex (in ordered pair form) of the parabola defined by
$y = 3x^2 + 3x - 9$

19. Determine if the 3 ordered pairs are collinear, form a right triangle, form an acute triangle, or form an obtuse triangle: (-3, 2), (0, -4), and (2, -3).

20. Find all vertical asymptotes (as equations) for the graph of $y = \frac{3x + 4}{x^2 - 4x}$

21. What is the center (in ordered pair form) of the circle defined by
$2x^2 + 2y^2 - 4x + 5y + 4 = 0$?

22. What is the radius of the circle in problem #21?