MTH 097 Review for Exam 2

Section 2.1 Linear Equations in two variables – be able to graph points on the coordinate plane, determine in an ordered pair is a solution to an equation, find x and y intercepts, and graph lines

See webskills #16, 19, 20, 21

1. Graph the points (-2, 1) (0, 5) (-5, -6) (4, -2) (-4, 0)

2. Is the point (2, -4) on the line $x - y = -2$?

3. Graph the line $y = \frac{1}{2}x - 4$ **4.** Graph the line $3x - 2y = 6$

5. Find the x-intercept and the y-intercept of the equation $x + 4y = 8$

Section 2.2 Slope of a line – be able to find the slope of the line given two points on the line, estimate the slope of a line given the graph of the line, and determine if two lines are parallel, perpendicular or neither.

See webskills #18

6. Find the slope of the line containing the points (2, –7) and (–2, 1)

7. Find the slope of the line containing the points (3, –7) and (3, 1)

8. Find the slope of the line containing the points (–2, 1) and (–3, 1)

9 and 10. What is the slope of the line in the graphs below?

11 and 12. Two points are given from each of two lines L1 and L2. Determine if the lines are parallel, perpendicular, or neither without graphing.

11. L1 (1, 3) and (2, 7)
L2 (0, 0) and (-4, 1)

12. L1 (-4, -3) and (-2, 3)
L2 (9, 1) and (6, 10)

Section 2.3 Equations of a Line – be able to graph equations of lines and find equations of lines.

See worksheet, finding equations of lines and webskills #22 and 23

13. Find the equation of the line that contains the points (1, 4) and (-1, 10).

14. Find the equation of the line that has a slope of 0 and contains the point (5, -7).

15. Find the equation of the line that contains the points (0, 2) and (-5, 2)

16. Find the equation of the line that has an undefined slope and contains the points (-6, 1)

17. Find the equation of the line that contains the points (1, -7) and (1, 8)

18. Find the equation of the line parallel to $3x + 7 = 4$ containing the point (-5, 2)

19. Find the equation of the line perpendicular to $y = 2x + 5$ containing the point (4, 9)

Section 8.5 – Graph Linear Inequalities in two variables

Graph the following inequalities

20. $y < 3x - 5$

21. $x + 4y \geq 8$

22. $5x - 2y < 10$

Linear Regression

You will need to know how use the calculator without the worksheet.

See the problems done in class and from the homework.