MAT 1033C	Name: _____
(Larson) 3.1, 3.3, 3.4, 3.5 and graphs of lines	Date: _____
Practice for Exam (V3) (All about Lines)	Section: _____

1. Find the slope of the line through (5,-9) and (-2, 7).

2. Find the slope of the line through (-2,5) and (4,-2).

3. Find the slope of the line $2x - 8y = 6$.

4. Find the slope of a line that is parallel to the line $4x - 7y = 64$.

5. Find the slope of a line that is perpendicular to the line $y = 6x - 7$.

6. Find the equation of the line through (-5,4) and (-3,-8). Write your answer in standard form.

7. Find the equation of the line through (4,6) and (-5,8). Write your answer in slope-intercept form.

8. Find the equation of the vertical line through (5, -3).

9. Find the equation of the horizontal line through (9,-2).

10. Find the equation of the line through (2,-2) that is parallel to the line $x = 5$.

11. Find the equation of the line through (7, -1) that is perpendicular to the line $x = 12$.

12. Find the equation of the line through (6, -7) that is parallel to the line $3x + y = 10$. Write your answer in slope intercept form.

13. Find the equation of the line through (-3,7) that is perpendicular to the line $2x - 7y = 14$. Write your answer in standard form.

14. Determine whether the following pairs of lines are parallel, perpendicular or neither:

a) $6x - y = 4$
$12x - 2y = -4$

b) $y = \frac{5}{4}x + 8$
$y = \frac{-4}{5}x - 4$

15. Graph each of the following lines:

a) $3x - 5y = 15$
b) $-4x + 5y = -20$
c) $-6x - 5y = 30$
d) $y = 4x + 5$
e) $x = 3$
f) $y = -4$

16. Sketch a graph of the line with slope $\frac{-5}{2}$ that goes through (8, 3).

17. Sketch a graph of the line with slope m = -3 that goes through (-1,3).

18. Graph each linear inequality in two variables on a coordinate plane.

a) $-4x + 3y \leq -12$
b) $y > -5$
c) $2x - 7y \geq -14$
d) $x \leq 4$

19. Find the midpoint between each set of points:

a) (-2,6) and (6, -5)
b) (3,-4) and (-2,-7)
c) (4, 0) and (-2, 0)

20. Find the distance between each pair of points:

a) (-2, 4) and (-3,7)
b) (7, 12) and (5, -1)
c) (0, 4) and (6, 4)

21. Find x when the line containing points (x, 6) and (-2, 8) has slope $\frac{4}{5}$.

22. In which quadrant(s) is the point (x, y) located when $xy < 0$?