

Show all work and simplify all answers before circling/boxing them. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for credit.

Final due date: the day of the Unit 2 Exam.

- (1) If one point on a graph is  $(6, 1)$  and the slope of the line is  $\frac{4}{3}$ , find the  $y$ -intercept of the graph.
- (2) Find the point-slope **and** slope-intercept form of the line with slope = 6 that is through the point  $(5, 3)$ .
- (3) Find the point-slope **and** slope-intercept form of the line with slope =  $-\frac{1}{4}$  that is through the point  $(4, -8)$ .
- (4) Find the point-slope **and** slope-intercept form of the line that goes through  $(3, -7)$  and  $(6, -6)$ .
- (5) Find an equation (in any form) of the line through  $(-6, -2)$  and  $(-2, 6)$ .
- (6) Find an equation (in any form) of the line through  $(12, 3)$  and  $(0, -1)$ .
- (7) Find an equation (in any form) of a line with slope  $\frac{4}{5}$  that is through the point  $(8, -8)$ .
- (8) The points  $(0, 2)$  and  $(-1, 1)$  are on line 1 and the points  $(0, 1)$  and  $(1, 0)$  are on line 2. Determine whether line 1 is parallel to line 2, perpendicular to line 2, or neither.
- (9) Determine whether the lines  $-3x + 4y = 1$  and  $4x + 3y = 18$  are parallel, perpendicular, or neither.
- (10) Determine whether the lines  $4x + y = 6$  and  $2x - 7y = 6$  are parallel, perpendicular, or neither.
- (11) Find an equation (in any form) of the line that is parallel to the graph of  $2x - 5y = 9$  and passes through  $(-6, -3)$ .
- (12) Find an equation (in any form) of the line that is perpendicular to the graph of  $4x - 7y = 1$  and passes through  $(-4, -5)$ .