1. (8 pts) Graph the linear equation 3x - 5y = 10. Show *x*- and *y*-intercepts.

2. (7 pts) Graph the linear inequality $3x - 5y \le 10$. Be sure and show the "good stuff" clearly. Hint: Use your work from #1.

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3. (5 pts) Graph the *intersection* of the following inequalities on the same set of coordinate axes. In other words, assume this is an AND situation, as in class. Hint: Use your work from #2.

 $3x - 5y \le 10$ $3x + 4y \le 12$ $y \ge 0$

4. (5 pts) Write 2x - 8y = 11 using function notation. What is the slope?

5. (5 pts) Use the slope and y-intercept to graph the linear function $f(x) = -\frac{4}{3}x + 5$. (I don't need to see an x-intercept.)

- 6. (5 pts) Find the slope of the line through (3, -5) and (-5, 4).
- 7. (5 pts) Find an equation of the line through (3, 5) and (- 5, 4). Give your final answer in **point-slope form**. Hint: Use your work from #6. (Shouldn't take much room!)
- 8. (5 pts) Re-write your answer to #7 in **slope-intercept form**.

- 9. (5 pts) Re-write your answer to #7 in function notation. (Shouldn't take much room!)
- 10. (5 pts) Re-write your answer to #7 in standard form, with only integer coefficients.

Graph the following linear equations:

11. (5 pts) y = -3 12. (5 pts) x = 7

13. (10 pts) Amanda can clean the windows of Benedetto's tropy home in 12 hours. Steve, a much better window washer, can do the job in a mere 15 hours. Steve is *so* good, he doesn't show up until 10:00 a.m. to help. Amanda starts a 6 a.m. What time will the job be finished?

- 14. (5 pts) Find an equation of the line through (3, 7) that is perpendicular to $y = \frac{8}{3}x 810$. Give your answer in point-slope form. (Shouldn't take much room!)
- 15. (5 pts) Find an equation of the line through (3, 7) that is parallel to $y = \frac{8}{3}x 810$. Give your answer in point-slope form. (Shouldn't take much room!)

16. (5 pts) Convert
$$\frac{2}{3}$$
 hour to minutes.

17. (5 pts) Sketch the graph of $g(x) = \sqrt{x+3}$ by transforming the basic function $f(x) = \sqrt{x}$. Two graphs, total. Key points to track: (0,0), (1, 1), and (4, 2). 18. (5 pts) Sketch the graph of $g(x) = (x-5)^2 + 1$ by transforming the basic function $f(x) = x^2$. Key points to track: (-1, 1), (0,0), and (1, 1).