

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

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

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.

$$3x - 5y \leq 10$$

$$3x + 4y \leq 12$$

$$y \geq 0$$

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.)

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 $(1, 1)$.