- Work sample assessment
  Tues. 10/21

- Thurs. 10/23 → unit test (4 & 5)

- Skills Tests 1 & 2 need to be passed by Fri. 10/24

Work sample assessment:

- Word problem
- plot points
- write equation
- graph lines
- use a linear equation

Unit test:

- 4.1, 4.2, 4.3, 4.5, 4.7
  5.1, 5.2, 5.5
- Plot points
- Graph lines
  - → table (x, y coord.)
  - → x + y intercept
  - → mx+b method
- Write equations
  - → from a graph → from slope + y int.
  - → x + y intercepts → from 2 points
  - → slope + 1 point
- Find equations of parallel and perpendicular lines

Quiz:

1. Write the equation of the line that passes through $(3,4)$ and has a slope of $\frac{-2}{3}$.

$y = \frac{-2}{3}x + b$

$4 = \frac{-2}{3}(3) + b$

$+2 \quad +2$

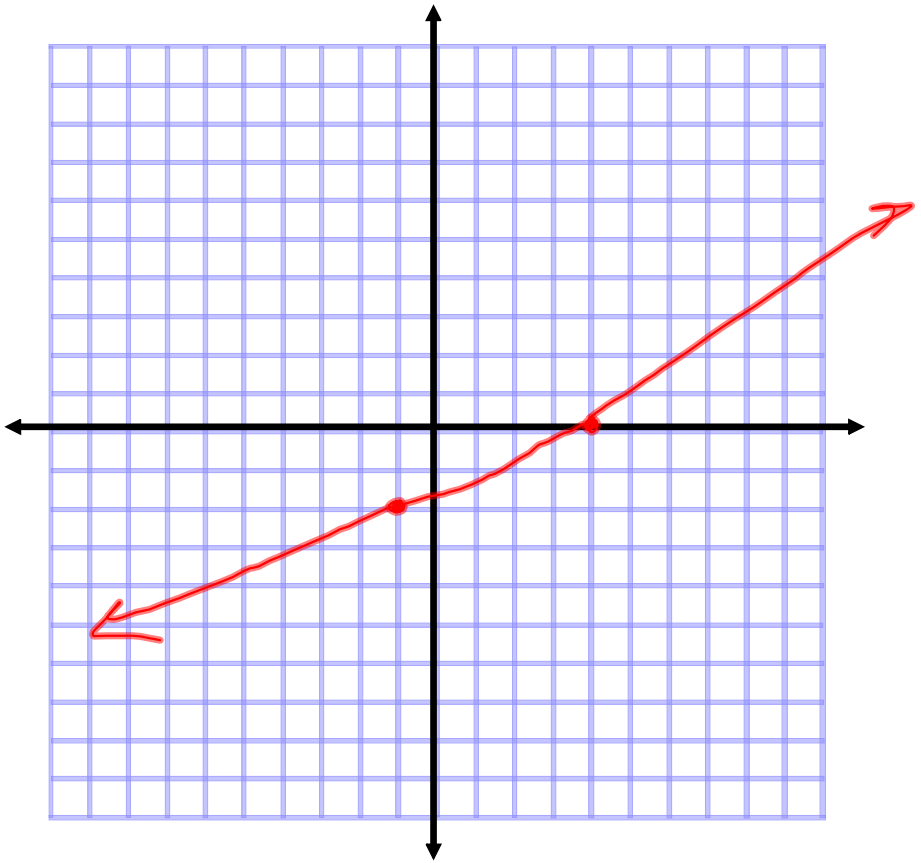
$6 = b$

$y = \frac{-2}{3}x + 6$

2. Write equation of a line perpendicular to the line graphed by $y = \frac{4}{3}x + 7$

$y = \frac{-3}{4}x - 2$

3. Graph the line with an x-intercept of 4 that goes through the point $(-1,-2)$



4. Graph the following equation: $2x - y = 3$

→ use the "table" x, y coord. method

→ check your work using slope / intercept

x	y
1	-1
2	1

$2(1) - y = 3$

$2 - y = 3$

$-y = 1$

$y = -1$

$2(2) - y = 3$

$4 - y = 3$

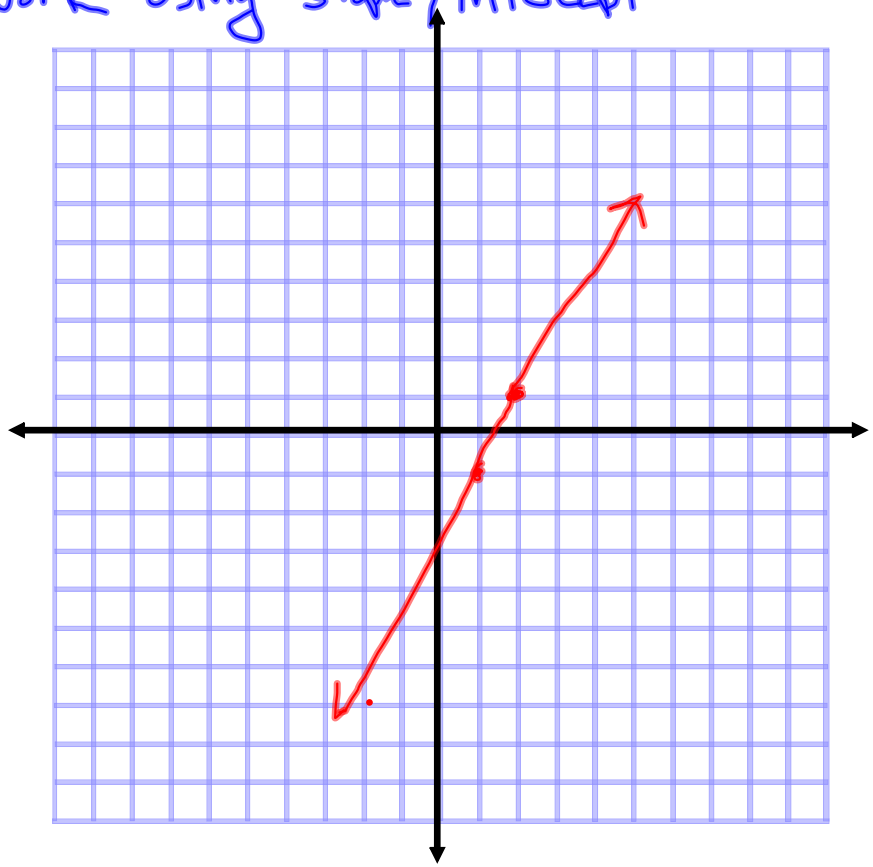
$-y = -1$

$y = 1$

$2x - y = 3$

$\frac{-y}{-1} = \frac{-2x}{-1} + \frac{3}{-1}$

$y = 2x - 3$



5. Write the equation for the line going through the points $(4,2)$ & $(-6,-1)$

$m = \frac{2 - -1}{4 - -6} = \frac{3}{10}$

$y = \frac{3}{10}x + b$

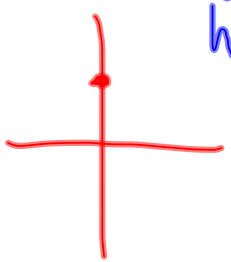
$2 = \frac{3}{10}(4) + b$

$2 = \frac{12}{10} + b$

$\frac{20}{10} - \frac{12}{10} = b \quad \frac{8}{10} \quad \frac{4}{5}$

$y = \frac{3}{10}x + \frac{4}{5}$

6. What is the slope of the line that goes through the point $(7,6)$ and has a y-intercept of 3? $(0,3)$ x_2, y_2



$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6-3}{7-0} = \frac{3}{7}$

$y = mx + b$

$y = mx + 3$

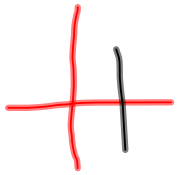
$6 = m(7) + 3$

$-3 \qquad -3$

$\frac{7m}{7} = \frac{3}{7}$

$m = \frac{3}{7}$

7. Write the equation of the line that goes through the points (7,6) and (7,3)



$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6-3}{7-7} = \frac{3}{0} = \text{undefined}$$

$$x = 7$$

8. Fortress can bench press 140 pounds. He is 15. Mr. Bregar can bench press 275 pounds. He is (a young) 38.

Assuming that the relationship between age and amount bench-pressed is linear:

1. Write the equation of the line (pounds as function of age)
2. Graph the line
3. How much can Mr. Kanter bench? (he is 25)

$(15, 140)$ $(38, 275)$

$$\frac{275-140}{38-15} = \frac{135}{23}$$

$$y = \frac{135}{23}x + b$$

$$140 = \frac{135}{23}(15) + b$$

$$140 = \frac{2025}{23} + b$$

$$\frac{3220}{23} - \frac{2025}{23} = b \qquad \frac{1195}{23} = b \cong 52$$

$$y = \frac{135}{23}(25) + \frac{1195}{23}$$

$$\frac{3375}{23} + \frac{1195}{23}$$

$$\frac{4570}{23} \cong$$

199 pounds