Math 1010 February 27, 2019 Homework 14
Read section 4.1 of your text

1. Consider the linear equation: 3x + 5y = 120

a. Find the x-axis intercept (y = 0)

b. Find the y-axis intercept (x = 0)

c. Sketch this equation using the x and y axis intercepts.

2. Find the slope m of the line through the following pairs of points. $m = \frac{y_2 - y_1}{x_2 - x_1}$

a. (3, 4) (-1, 10)

b. (4, -3) (4, 9)

c. (-6,2) (5,2)

d. (2.1, -9.6) (8.5,21.6)

3. Find the slope m of each linear equation. (Solve for y, then y = mx + b)

a. 2x +4y = 12

b. 5x - 3y = 7

c. 12.8x + 9.7y = 44.8

3. Find the slope $m_\perp$ of the line perpendicular to each line described by equation. $m_\perp = \frac{-1}{m}$

a. y = 6x - 17

b. 6x + 5y = 11

c. 4.3x + 9.6y = -122.8

4. Find the equation of the line through (3,8) which is parallel to the line 6x - 5y = 2
HINT: Find slope m, then: $y = m(x - x_1) + y_1$

5. Find the equation of the line through (7,-2_ which is perpendicular to the line 3x - 5y = 9
HINT: Find slope m, then $m_\perp$, then: $y = m(x - x_1) + y_1$

6. Find the equation of the line through the points (2,11) and (4, -17)
HINT: Find slope $m = \frac{y_2 - y_1}{x_2 - x_1}$, then: $y = m(x - x_1) + y_1$

7. Find the equation of the horizontal line through the point (12,13)
HINT: The horizontal line through (a,b) is y = b

8. Find the equation of the vertical line through the point (3.2, -8.7)
HINT: The vertical line through (a,b) is x = a