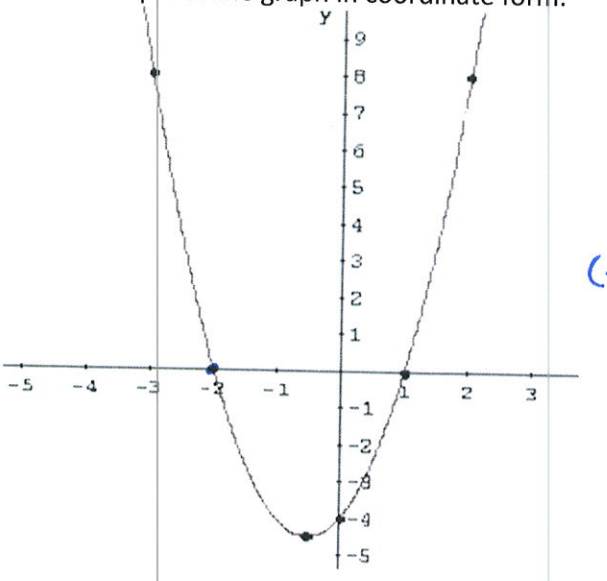
MAT 011, Quiz #5, Fall 2015 Name KEY

Instructions: Show all work. Use exact answers. Be sure to answer all parts of each question.

1. List the intercepts of the graph in coordinate form.

a.



(-2,0), (4,0)
(0,-4)

b. $3x - 5y = 60$

(0,-12) (20,0)

2. Find the slope of the line connecting the points $(4,-3), (2,2)$.

$$\frac{2-(-3)}{2-4} = \frac{5}{-2} = -\frac{5}{2}$$

3. Are the lines $\begin{cases} 10 + 3x = 5y \\ 5x + 3y = 1 \end{cases}$ parallel, perpendicular or neither?

$2 + \frac{3}{5}x = y$

$\frac{3y}{3} = \frac{-5x+1}{3}$

$y = -\frac{5}{3}x + \frac{1}{3}$

perpendicular

4. Find the equation of the line with the given properties.

a. $m = \frac{2}{3}, b = \frac{3}{4}$

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

b. $m = 2$ through $(-1,-5)$

$y + 5 = 2(x+1)$

$y + 5 = 2x + 2$

$-5 \quad -5$

$y = 2x - 3$

c. Vertical line through $(6, -7)$ $x = 6$

d. Parallel to $y = \frac{1}{2}x + 7$ through $(2,6)$.

$y - 6 = \frac{1}{2}(x - 2)$

$y - 6 = \frac{1}{2}x - 1$

$+6 \qquad +6$

$y = \frac{1}{2}x + 5$