Math 105, Section 052 - Quiz 2 **Name:** _____
Date: 01/18/17

Write legibly, show all your work, and clearly indicate your final answers.
No books, notes, calculators etc. are permitted.

(1) (*10 points*)
   (a) Graph the function $f(x) = 2x - 1$ using the window $-5 \leq x \leq 5, -5 \leq y \leq 5$.
   (b) Find $f(3)$.
   (c) Find a point on the graph of f which is also on the $x-$axis.
   (d) Find a linear function g whose graph is perpendicular to the graph of f and passes through the point $(0, 2)$.

(2) (*5 points*) Emily walks on the cartesian plane. Initially, Emily is standing on the point $A(1, -2)$. Then Emily walks to the point $B(-2, 5)$. Assume that she moves on a straight line from A to B. Did Emily pass through the origin (0,0)? Explain your answer.

(3) (*5 points*) Let a and b be real numbers. Quantities x and y are shown in the following table

x	1	2	3	b
y	3	a	7	10

(a) If $a = 3$ and $b = 5$, is y a function of x?
(b) Given that $a = 15$ and that y is a function of x, what are the restrictions for b? In other words, can b be any real number?
(c) Given that $a = 10$ and that y is a function of x, what are the restrictions for b? In other words, can b be any real number?