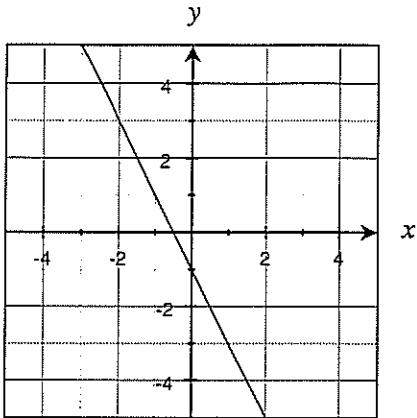


Name: Solutions

Math 105B: Winter 2013  
Quiz 1: January 18

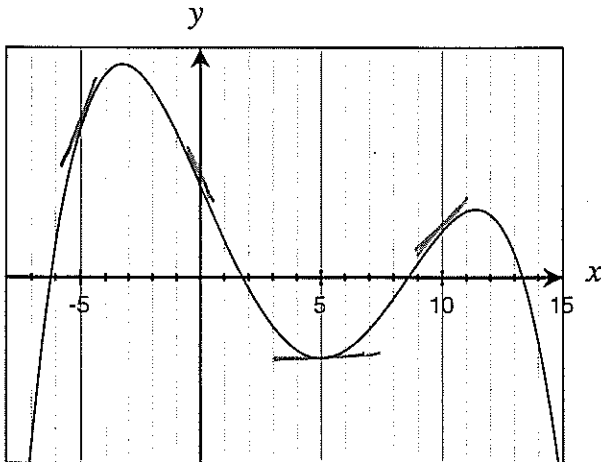
Please write your final answer in the space provided. Correct answers accompanied by incorrect or incomplete work will not receive full credit. Good Luck!

1. Write the equation of the the line shown.



(1)  $y = -2x - 1$

2. The graph below is the graph of  $y = f(x)$ . Rank  $f'(-5)$ ,  $f'(0)$ ,  $f'(5)$ ,  $f'(10)$  in increasing order.



(2)  $f'(0), f'(5), f'(10), f'(-5)$

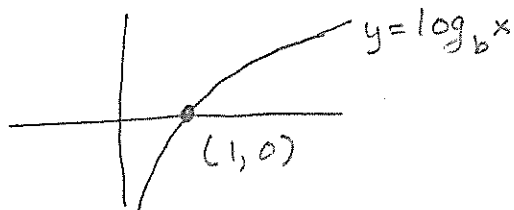
$f'(-5) = \text{pos (big)}$

$f'(0) = \text{neg}$

$f'(5) = 0$

$f'(10) = \text{pos (small)}$

3. What point is on the graph of  $y = \log_b x$  for every positive number  $b$ ?

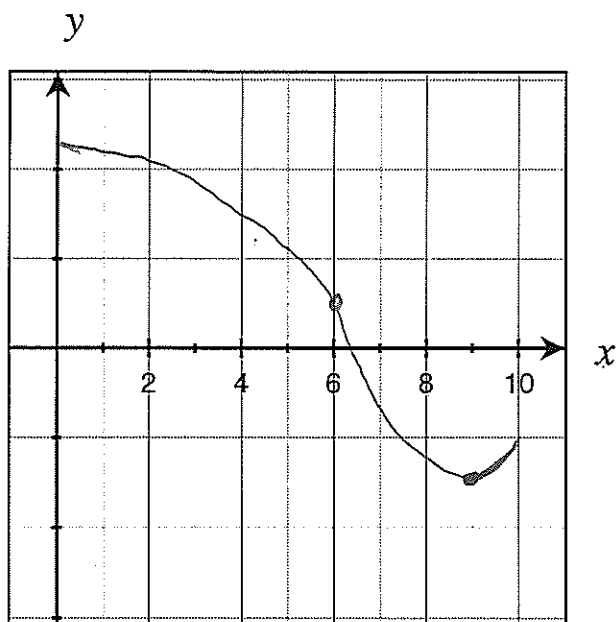


(3)  $(1, 0)$

4. Suppose that the graph of  $y = T(x)$  is

- decreasing for  $0 < x < 9$
  - increasing for  $9 < x < 10$
  - concave down for  $0 < x < 6$
  - concave up for  $6 < x < 10$ .
- $6 = \text{inflection point}$

Sketch the graph of a continuous function  $T(x)$  with these properties.



this is just one possible graph