

**Reading Questions for Section 5.1-5.3**

Name \_\_\_\_\_

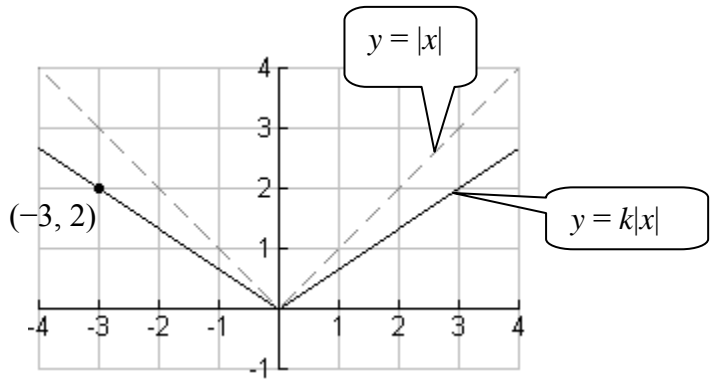
Due Date: Tuesday, June 10

1. The functions  $f(x)$  and  $f(x) + c$  always have the same
  - Zeros
  - Vertical intercept
  - Domain
  - Range
  - None of the above
  
2. The function  $f(x)$  and  $f(x + c)$  always have the same
  - Zeros
  - Vertical intercept
  - Domain
  - Range
  - None of the above
  
3. The graph of  $f(x + c)$ , with  $c > 0$ , is the graph of  $f(x)$  but shifted to the right by  $c$  units.
  - True
  - False
  
4. If  $f(x) = e^x$ , then what is  $f(x + 1)$ ?
  - $f(x + 1) = e^x + 1$
  - $f(x + 1) = e^{x+1}$
  - Both of these
  - None of these
  
5. If  $f(x) = x^2$ , then what write  $g(x) = (x + 1)^2 + 3$  in terms of  $f(x)$ .
  - $g(x) = f(x + 1)^2 + 3$
  - $g(x) = f(x^2 + 1) + 3$
  - $g(x) = f(x + 1) + 3$
  - $g(x) = f(x + 1^2) + 3$
  - $g(x) = f(x + 1) + 3^2$
  - $g(x) = f(x + 1^2) + 3^2$
  - $g(x) = f(x^2 + 1^2) + 3^2$
  - $g(x) = f((x + 1) + 3)^2$
  - None of these
  
6. An **even** function is symmetric with
  - the  $x$ -axis
  - the  $y$ -axis
  - the line  $y = x$
  - the origin
  - None of these
  
7. An **odd** function is symmetric with
  - the  $x$ -axis
  - the  $y$ -axis
  - the line  $y = x$
  - the origin
  - None of these

8. Read Example 5 in Section 5.2 about the yam warming in the oven.  
The function  $Y(t)$  was obtained from the function  $D(t) = 300(0.97)^t$  by

- o first shifting the graph of  $D(t)$  up 300, followed by reflecting it about the  $t$ -axis.
- o first reflecting the graph of  $D(t)$  about the  $t$ -axis and then shifting it vertically up 300.
- o Either of these
- o Neither of these

9. Recall the graph of  $y = |x|$  from Section 2.3.  
After reading Section 5.3,  
what is the value of  $k$  in  
the function  $y = k|x|$  as shown in the figure?



- o  $3/2$
- o  $2/3$
- o  $-3/2$
- o  $-2/3$
- o None of these

10. Read Section 5.3 about **Stretch Factors and Average Rates of Change**. What is the relationship between the two dashed lines shown in the figure?

- o one is twice as long as the other
- o one has twice the slope of the other
- o Both of these
- o None of these

