

Lorie Hughes Math 1010 Chapter 7/ 8 In Class Test
DO NOT write on this test! Do all of your work on a separate piece of paper!
Place your answers on the sheet provided.

Find the slope of the line through the pair of points.

- 1) $(-8, -1)$ and $(3, -9)$

Decide whether the pair of lines is parallel, perpendicular, or neither.

- 2) $8x + 6y = -17$ and $4y = 3x - 19$

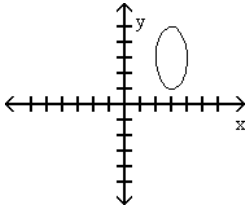
Find an equation of the line, and write it in slope-intercept form.

- 3) Through $(-7, 5)$; $m = -5$

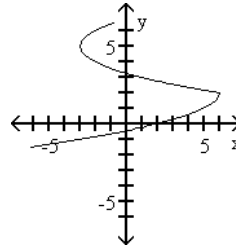
- 4) Through $(-3, -7)$ and $(5, -2)$

- 5) Which one of the following is the graph of a function?
Give its domain and range.

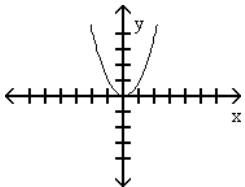
A)



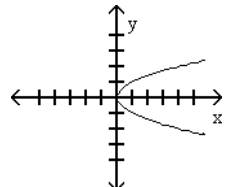
B)



C)



D)



Solve the problem.

6) Find $f(4)$ when $f(x) = -x^2 + 3x + 1$.

7) Find $f(a)$ when $f(x) = -x^2 - 2x + 2$.

For the given pair of functions, find the requested function.

8) $f(x) = 5x - 3$, $g(x) = -9x^2 - 14x + 10$; $(f + g)(x)$

9) $f(x) = 6x^2 + 15x + 8$, $g(x) = 3x^2 + 11x - 3$; $(f - g)(x)$

10) Let $f(x) = x^2 - 2$ and $g(x) = 4x + 1$; $(f - g)(5)$.

11) Let $f(x) = x^2 + 4$ and $g(x) = 3x + 7$; $(g \circ f)(6)$.

12) Let $f(x) = 5x^2 + 2x + 6$ and $g(x) = x - 1$; $(f \circ g)(x)$.

13) $f(x) = x^2 - x - 8$, $g(x) = x - 1$; $(fg)(x)$.

14) $f(x) = x^2 + 10x + 16$, $g(x) = x + 2$; $\left(\frac{f}{g}\right)(x)$.

Decide whether or not the ordered pair is a solution of the system.

15) $(5, -22)$

$$y + 5x = 3$$

$$x + y = -17$$

Graph the linear function. What is its domain and range?

16) $f(x) = \frac{5}{4}x - 3$

Solve the system by graphing.

17) $x - y = 2$

$$x + y = 16$$

Solve the system by substitution or elimination.

18) $x - 3y = -3$

$$-7x - 4y = -54$$

Graph the linear inequality.

19) $5x + y \leq -1$

Graph the compound inequality.

20) $x + y \geq 2$ and $y \leq 2$