Name:_____ Date:_____

PC: Function Practice Ms. Loughran

1. If $f(x) = x^2 + 2x + 5$ and $g(x) = x - 1$, then $f(g(x))$ is

[1] $x^2 + 3x + 4$ [2] $x^2 + 4$ [3] $x^2 + 4x - 1$ [4] $x^2 - 1$

2. For which value of x is $f(x) = -65$ given $f(x) = -3x^2 - 2x$?

[1] 7 [2] -7 [3] 5 [4] -5

3. Which function is *not* one-to-one?

[1] {(0,1), (1,2), (2,3), (3,4)}

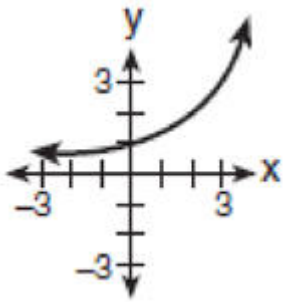
[2] {(0,0), (1,1), (2,2), (3,3)}

[3] {(0,1), (1,0), (2,3), (3,2)}

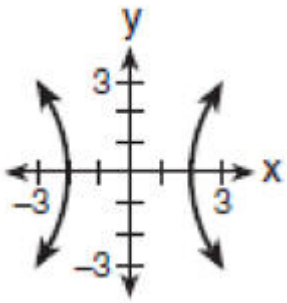
[4] {(0,1), (1,0), (2,0), (3,2)}

4. Which graph is *not* a function?

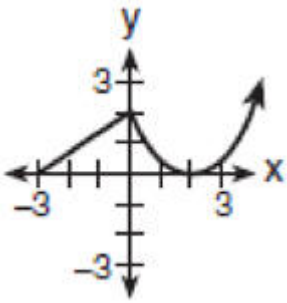
[1]



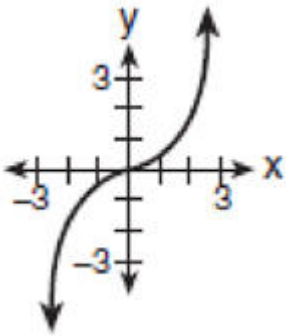
[2]



[3]



[4]



5. If the domain of $f(x) = 2x + 1$ is $\{-2 \leq x \leq 3\}$, which integer is *not* in the range?

[1] -4 [2] -2 [3] 0 [4] 7

6. If $f(x) = x^2 + 4$ and $g(x) = \sqrt{1-x}$, what is the value of $f(g(-3))$?

[1] 13 [2] 8 [3] 2 [4] $2i\sqrt{3}$

7. Which equation does *not* represent a function?

[1] $y = 2x$ [2] $y = x^2 + 10$ [3] $y = 10/x$ [4] $x^2 + y^2 = 95$

8. What is the inverse of the function $y = 2x - 3$?

[1] $y = \frac{x+3}{2}$ [2] $y = \frac{x}{2} + 3$ [3] $y = -2x + 3$ [4] $y = \frac{1}{2x-3}$

9. Given $g(x) = \frac{1}{x-4}$, find $g\left(\frac{2}{5}\right)$.

[1] -5/3 [2] -5/18 [3] -18/5 [4] -3/5

10. The function $f(x) = 3x - 7$ is

[1] one-to-one, but not onto
[2] onto, but not one-to-one
[3] both one-to-one and onto
[4] neither one-to-one nor onto

11. The range of the function $f(x) = (x + 6)^2$ is

[1] All Reals [3] $[-6, \infty)$
[2] $[6, \infty)$ [4] $[0, \infty)$