Math 1350 Diagnostic Test

June 28, 2010

Name:

1. Let $f(x) = x^2 + 2x + 6$ and $g(x) = \sqrt{2x + 7}$.

   (a) $f(3) =$

   (b) $g(2y + 1) =$

   (c) $f(g(x)) =$

   (d) $g \circ f(-3) =$

   (e) Is f a one-to-one function (also called an injective function)? Why or why not?

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2. Simplify $\dfrac{x^3 \cdot x^4}{x^5}$.

3. Solve for x: $\left(2^5\right)^3 = 2^x$

4. $h(x) = \begin{cases} x+5 & x < 3 \\ 3x+1 & x \geq 3 \end{cases}$

   (a) $h(3) =$

   (b) $h(0) =$

5. Why did you choose to take this class?

6. When was the last math class you took, and what class was it?

7. What are ways that I can assist you in learning math?