

MTH 65 – Graded Homework 8

Due: 2:30 pm, February 9, 2011

Name _____

You may work on this assignment with your classmates or anybody else you please. You may get help from a tutor or even the instructor. What you may not do is simply copy somebody else's work – that completely obviates the purpose of the assignment. If you forget to complete the assignment before it is due, do not simply copy someone else's paper and turn that in ... that is not "working together," that is taking credit for somebody else's work.

Problem 1

Simplify each expression. **Make sure that you show steps using proper organizational strategies.**

a. Simplify $\frac{y^{-3}}{(y^4)^{-2}}$.

b. Simplify $(-2y^{-1})^{-3}$

c. Simplify $\left(\frac{3x^{-1}y^8}{4^{-1}x^{-6}y^{-8}}\right)^{-2}$

Problem 2

Simplify each expression as directed. **Make sure that you show steps using proper organizational strategies.**

a. Perform the division $\frac{12x^7 - 18x^5 + 3x^4}{3x^4}$; completely simplify the result.

b. Subtract $-3x^2 + 14x - 7$ from $-2x^2 - 6x + 5$; completely simplify the result.

Problem 3

Consider the function g shown in Figure 1.

a. What is the function value at 6?

b. What are the solutions to the equation $g(x) + 2 = 6$?

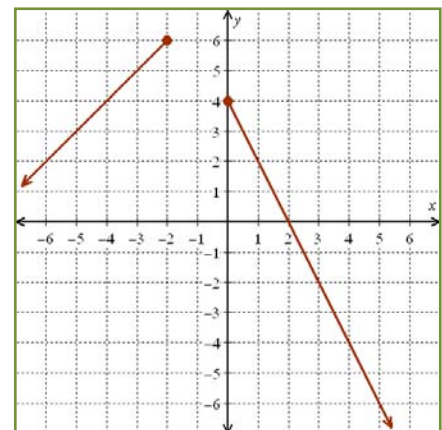


Figure 1: g