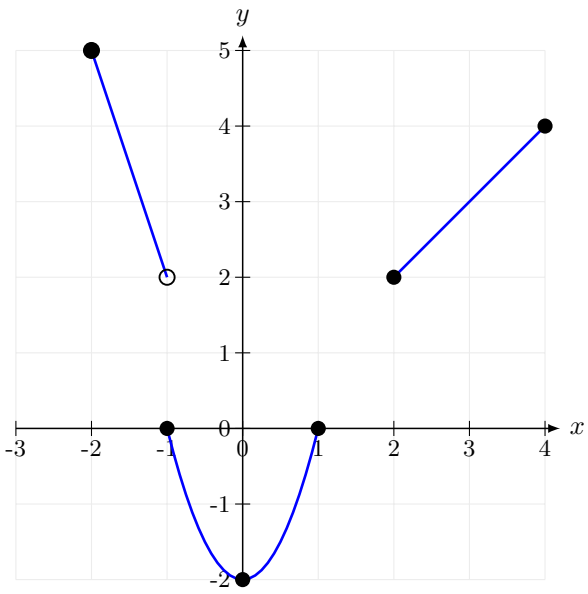
Math 115E Activity 7

Chapter 3 Section 3
Algebra of Functions

COMPLETE FOR 2 BONUS POINTS BY SEP 25TH

Continuation of Algebra of Functions

1. Let $f(x)$ be the function given by the graph
   Let $g(x)$ be given as $g(x) = 1 - x - x^2$
   Let $h(x)$ be the function given by the table



x	-5	-3	-1	0	2	4	5	6
$h(x)$	-2	-0.5	0.5	2	3	9	0	15

Find the following

(a) Find $f(x) = 2$

(b) Find $g(f(3))$

(c) Find $(f \cdot g)(2)$

(d) Find $(f \cdot g)(0)$

(e) Find $(h - f)(4)$

(f) Find $(h \cdot f)(0)$

(g) Find $h(g(2))$

(h) Find $h(f(-1))$

2. Fill out the table using $g(x) = \frac{1}{3}x(x^2 - 10) + 2$

x	-4	-3	-2	-1	0	1	2	3	4
$f(x)$	-6	-2	0	-1	3	5	-7	2	0
$g(x)$									

(a) Find $(f \cdot g)(3)$

(b) Find $(f \cdot f)(3)$

(c) Find $(g \cdot g)(-2)$

(d) Find $g(f(3))$

(e) Find $g(g(1))$

(f) Find $g(f(1) - g(2))$

(g) Find $f(g(1) + g(3))$

(h) Find $g(g(3) \cdot f(4))$

(i) Find $f(f(-2) \cdot f(2))$

(j) Find $g(g(g(1)))$