Name:

Date:

Topic/ Objective: Combining functions Day 2

Homework:

Examples: $f(x) = 2x + 4$ and $g(x) = -3x - 1$

Find: $(f + g)(x) = f(g) + f(x)$

$2x + 4 + -3x - 1$

$2x - 3x + 4 - 1$

$-x + 3$

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

$(f + g)(x) = -x + 3$

$(f + g)(3) = -3 + 3$

$= 0$

Find: $(f - g)(x)$

$2x + 4 - (-3x - 1)$

$2x + 4 + 3x + 1$

$2x + 3x + 4 + 1$

$5x + 5$

Find: $(f - g)(5)$

$(f - g)(x) = 5x + 5$

$(f - g)(5) = 5(5) + 5$

$= 25 + 5$

$= 30$

Find: $(3f)(x)$

$f(x) = 2x + 4$

$3f(x) = 3(2x + 4)$

$\qquad = 6x + 12$

Find: $(3g)(x)$

$g(x) = -3x - 1$

$(3g)(x) = 3(-3x - 1)$

$\qquad = -9x - 3$

Find: $(3f)(3)$

$(3f)(x) = 6x + 12$

$(3f)(3) = 6(3) + 12$

$\qquad = 18 + 12$

$\qquad = 30$

Find: $(3g)(5)$

$(3g)(x) = -9x - 3$

$(3g)(5) = -9(5) - 3$

$\qquad = -45 - 3$

$\qquad = -48$