**4.1 – Composite Functions**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per:\_\_\_\_\_

SWBAT: 1. Form a composite function. 2. Find the domain of a composite functions

Ex.1 – Suppose that f(x) = 2x2 – 3 and g(x) = 4x. Find the following:

a.(f ◦ g) (1) b. (g ◦ f)(1) c. (f ◦ f)(-1)

Ex.2 – f(x) = x2 + 3x -1 and g(x) = 2x + 3. Solve and find the domain of the following:

1. f ◦ g b. g ◦ f

Ex.3 – Find the domain of (f ◦ g)(x) if f(x) = 1/(x+2) and g(x) = 4/(x – 1)

Ex.4 - f(x) = 1/(x + 2) and g(x) = 4/(x – 1) Solve and find the domain of the following:

1. g ◦ f b. f ◦ f

Ex.5 – If f(x) = 3x – 4 and g(x) = , show that (f ◦ g)(x) and (g ◦ f)(x) = x, for every x in the domain of f ◦ g and g ◦ f.

Ex.6 – Finding the components of a composite function

Find the functions f and g such that f ◦ g = H if H(x) = (x2 +1)50