Math 4 Honors Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Learning Check: Lesson 1-2 Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Score: 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0

In this Learning Check, you are being assessed on the following learning goals:

* *I can use the definitions and important properties of arithmetic operations on functions.*
* *I can combine functions by arithmetic operations.*
* *I can understand function composition and construct rules for composite functions from rules of the component functions.*

\*\*\*NO CALCULATOR\*\*\*

1. If *f*(*x*) = 2*x –* 1 and *g*(*x*) = *x*2, then (*f ○ g*) (*x*) =

A. (2*x*  *–* 1)2

B. (2*x*)2 – 1

C. 2*x*2 – 1

D. *x*2 + 2*x –* 1

2. Use your answer from #1 to find *f* (*g*(-2)).

3. Let . Find 

 \*\*\*Write your answer in standard polynomial form.

4. Given that  identify two functions *f* and *g* so that (*f ○ g*) (*x*) = *h*(*x*). 

5. Find the inverse of 

1. Verify by composition your rule is correct.
2. State the domain of the inverse function in interval form.