First Name _____ Last Name _____ Due ___ – ___ – ___ Period ____ Score ____

MODEL	Integrating	Applying	Practicing	Acquiring	Awaiting Evidence
I can use math to model and solve real-world problems.	Correctly identifies important quantities and illustrates their relationships using diagrams, tables, graphs, or formulas. Appropriate work is shown with no errors. The answer includes units and rounding as appropriate to the problem. Explains how the answer makes sense in the context of the problem.	Correctly identifies important quantities and illustrates their relationships using diagrams, tables, graphs, or formulas. Appropriate work is shown with no errors. The answer includes units and rounding as appropriate to the problem.	Correctly identifies important quantities and illustrates their relationships using diagrams, tables, graphs, or formulas. Appropriate work is shown with 1 COMPUTATIONAL or ROUNDING error.	Correctly identifies important quantities and attempts to illustrate their relationships using diagrams, tables, graphs, or formulas Appropriate work is shown with 1 CONCEPTUAL error.	Correctly identifies important quantities and attempts to illustrate their relationships using diagrams, tables, graphs, or formulas Appropriate work is shown with more than 1 conceptual error.
Criteria					

1. Create a problem of composing two polynomial functions.

   Let $f(x) =$ _____ and $g(x) =$ _____.

   (a) (**Instruction**: Fill the blank with a number.) Find $f(g(\_\_\_\_))$.

   (b) (**Instruction**: Fill the blank with a first degree polynomial.) Find $g(\_\_\_\_\_)$ and simplify.

   (c) Find $(g \circ f)(x)$ and simplify.

2. Create a problem of composing two functions via tables.

(**Instruction:** Define your functions by completing the tables.)

x						
f(x)						

x						
g(x)						

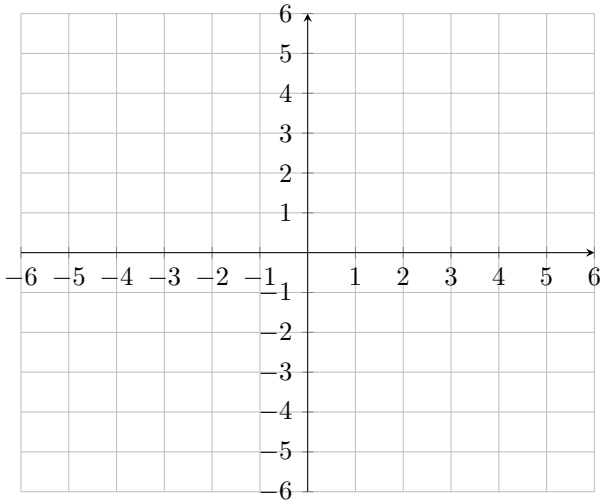
(**Instruction**: Fill each blank with a number.) Find the following using the tables above:

(a) $(g \circ f)(\_\_\_\_)$

(b) $(f \circ g)(\_\_\_\_)$

3. Create a problem of composing two functions via graphs.

(**Instruction**: Make the graphs of your functions below. Label them clearly.)



The graph above contains the lines for $h(x)$ and $k(x)$. Use it to find the following $(h \circ k)(\_\_\_\_\_)$. (**Instruction**: Fill the blank with a number.)