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

BE PRECISE	Integrating	Applying	Practicing	Acquiring	Awaiting Evidence
I can calculate accurately and efficiently, and be precise in all of my math.	Selects and applies the correct procedure and solves all routine AND integrating problems. AND Expresses the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab. . .)	Selects and applies the correct procedure and solves all routine problems. AND Expresses the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab. . .)	Selects and applies the correct procedure and solves most routine problems. AND Expresses the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab. . .)	Selects and applies the correct procedure and solves some routine problems. AND Attempts to express the answer to the correct level of precision needed for the problem (including the correct rounding, units, math symbols, labeling, graphing, vocab. . .).	Selects and attempts to apply the correct procedure for some routine problems.
Criteria					

1. **Survey.** If there is a "distraction-free zone" in the classroom, would you like to reserve a seat in it, knowing that residents of this zone agree to follow the distraction-free policy? **Yes** **No**

   (Note: You will receive a 0.5 point deduction for not answering this survey question.)

2. The standard form of a quadratic equation is $ax^2 + bx + c = 0$. Identify the a, b and c for the following equations:

   (1) $2x^2 - 5x + 2 = 0$. $a =$ _____ $b =$ _____ $c =$ _____

   (2) $-5x^2 + 3x + 23 = -44$. $a =$ _____ $b =$ _____ $c =$ _____

3. Let $f(x) = 3x + 2$ and $g(x) = x^2$.

   (a) Find $f(g(-3))$.

   (b) Find $g(x + 1)$ and simplify.

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

4.

x	1.0	1.5	2.0	2.5	3.0	3.5
f(x)	2.8	2.6	2.5	2.0	1.0	2.2

x	2.0	2.2	2.4	2.6	2.8	3.0
g(x)	1.2	1.5	3.0	2.8	2.5	2.0

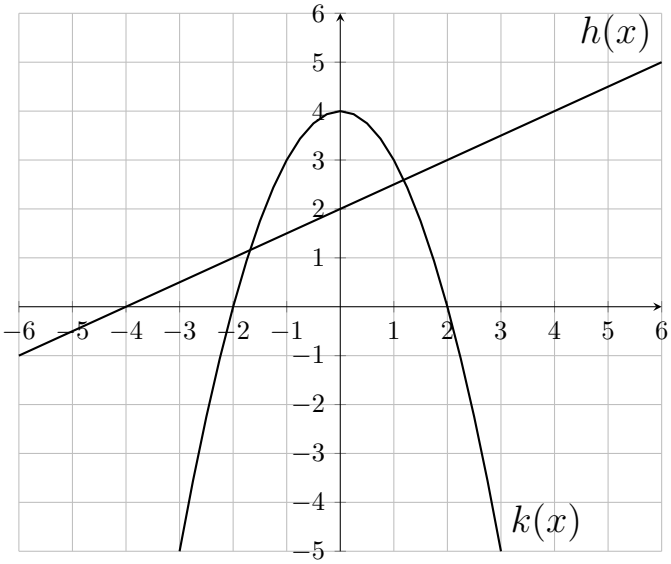
   Find the following using the tables above:

   (a) $(g \circ f)(1.0)$

   (b) $(f \circ g)(2.2)$

   (c) $(g \circ g)(3.0)$

5. The graph below contains the lines for $h(x)$ and $k(x)$. Use it to find the following:



a) $(h \circ k)(3) =$

b) $(h \circ k)(2) =$

c) $(k \circ h)(-2) =$

d) $(k \circ h)(-4) =$

6. When a small stone is dropped into a calm pond, the radius of the outermost visible ripple (in centimeters) after t seconds is modeled by

$$r(t) = 6\sqrt{t}.$$

The area of the ripple (in cm^2) is given by $A(x) = \pi x^2$. Assume the ripple fades and disappears after 10 seconds.

(a) Find $(A \circ r)(t)$ and simplify.

(b) Find the realistic domain and range of $(A \circ r)(t)$.

(c) Explain in words what $(A \circ r)(t)$ represents in this situation.