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

Lesson 6-1 Learning Check Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In this learning check, you will be assessed on the following concepts:

* *I can compute average rates of change in functions.*
* *I can find the formula for the difference quotient of a function and use it to solve problems.*
* *I can use secant lines to determine the average rates of change in graphs of functions.*

1. Consider the following function:

Find the average rate of change from .

2. A projectile follows along a path given by the formula . Find a formula for the difference quotient given the average rate of change for each interval *t* to *t* + Δ*t.*

 ***Work vertically; do not skip any steps.***

3. Use your answer from #2 and *t =* 6 to find the average velocity when . . .

 a.) Δ*t* = 2 b.) Δ*t* = 1 c.) Δ*t* = .5 d.) Δ*t* = .01

 = \_\_\_\_\_\_\_\_\_\_\_

4. Refer to the graph at the right.

1. Find the average rate of change

from A to C.

1. Over what interval is the average rate

rate of change of *f* zero?

1. Find the average rate of change in *f*

over the interval 0 < *x* < 8.

1. Estimate *f* ’when *x =* 4.