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

Quiz Review: Lessons 6-1 & 6-2 Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Consider the following function:

Find the average rate of change from .

2. Let *f* be the function . Use the *definition of derivative* to find.

3. Find the derivative of the function in #2 when *x =* -8. Is *f* increasing or decreasing when

*x =* -8?

4. 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.*

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5. Use your answer from #4 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

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

6. 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. Give a *value* of *x* for which *f’(x)* is negative.

e. Estimate *f’* when *x =* 4.