AGS 1 Name: _____ Period: _____ Date: _____

Assignment 2.1 – Discrete vs. Continuous Relationships

Identify whether the following statements represent a *discrete* or a *continuous* relationship, then explain why you chose either discrete or continuous.

1. The hair on your head grows ½ inch per month. *Discrete or Continuous?*

   Explanation:

2. For every ton of paper that is recycled, 17 trees are saved. *Discrete or Continuous?*

   Explanation:

3. Approximately 3.24 billion gals for water flow over Niagara Falls daily.

   Discrete or Continuous?

   Explanation:

4. The average person laughs 15 times a day. *Discrete or Continuous?*

   Explanation:

5. The city of Buenos Aires adds 6,000 tons of trash to its landfills every day.

   Discrete or Continuous?

   Explanation:

6. During the Great Depression, stock market prices fell 75%. *Discrete or Continuous?*

   Explanation:

Refresh Your Memory

Evaluate each using the values given.

7. $2y - 3(z + z^2); use\ y = 10\ and\ z = 2$

8. $\frac{(y+x)}{2} + 6x; use\ x = 3\ and\ y = 4$

9. $\frac{x^3}{3} - 5y; use\ x = 6\ and\ y = 12$

10. $c\left(\frac{bc}{4}\right)^2 - 2(7 - a);$
$use\ a = 4, b = 2, and\ c = 6$

11. Identify the type of sequence and write a recursive and explicit function.

x	$f(x)$
0	1.5
1	0.75
2	0
3	-0.75

a) Is this arithmetic or geometric?

b) Recursive:

c) Explicit: