Name: Date: Period:

Show all your work on a separate sheet of paper.

Evaluate the following function for the given values:

$$f(x) = 4x + 1$$

1. f(2)	2. f(5)	3. f(-2)	4. f(0)

Evaluate the following functions for the given values:

$$f(x) = x^2 - 1 \qquad\qquad g(x) = \frac{-1}{x}$$

5. g(2)	6. f(5)	7. g(-2)	8. f(0)

Find each given value using the following function:

$$f(x) = |2x + 1| \qquad\qquad g(x) = x^2 - x$$

9. f(3)	10. f(-3)	11. g(3)
12. g(-3)	13. f(3) − g(3)	14. g(2a)

Let f(x) = 3x + 4 and g(x) = |x - 4|, find the following

1. f(2)	2. f(3)	3. g(6)	4. g(2)
5. 2f(6)	6. 0.5g(2)	7. f(4) − g(3)	8. g(5) − f(5)
9. f(0)²	10. g(3)³	11. g(a)	12. f(2b)

For #s 1 – 4, choose the best multiple-choice answer, given $f(x) = x\,(x-6)^2 + 2$ and $g(x) = 3|x+4|$. Show your work.

1. Find f(3)

    a. 2   b. 20   c. 29   d. 38

2. Find g (-6)

    a. 30   b. -6   c. -30   d. 6

3. Find f(5) – g(5)

    a. -27   b. -20   c. 34   d. -22

4. Given, $f(x) = 2(x-6)^2 + 2$, Find f(2c)

    a. $4c^2 - 24c + 36$ b. $4c^2 - 24c + 38$ c. $8c^2 - 48c + 72$ d. $8c^2 - 48c + 74$

Answer the following questions using what you know about slope (rate of change) and y-intercept (starting point).

1. Carla puts away a certain amount of money per week. She started out with a certain amount. Find what she started out with and what she puts in per week (rate of change)?

Week	0	1	2	3	4	5	6
Amount in account	74	82	90	98	106	114	122

    [a] Amount started with? _____   [b] How much per week? _____

2. How much money did Gina start out with if the table shows her balance beyond 4 weeks?

Week	4	5	6	7	8	9	10
Account balance	75	92	109	126	143	160	177

    [a] Amount started with? _____

3. Rob is training for a marathon. He is increasing his run each week. Based on the table, answer the questions below:

# of Weeks of Training	2	3	4	5	6	7
Miles	7	10	13	16	19	22

    [a] How much more will he run each week?   _____

    [b] How many miles was he running before he began training?   _____

    [c] How many weeks until he runs a full marathon of 26.2 miles?   _____

4. Evan is buying pizza from a store that sells each pie for a given price and each topping for a set price.

# of Toppings	1	2	3	4	5
Cost	15.25	16.50	17.75	19.00	20.25

    [a] Use the table to identify the cost of each topping.   _____

    [b] How much is a pie without any toppings?   _____