DATE: _____

ALGEBRA

1 – 5 Multiple Choice. (3 points each)

1. An expression of the sixth degree is written with a leading coefficient of five and a constant of three. Which expression is correctly written for these conditions?

a.
$$3x^6 - x^4 + 5$$

b.
$$5x^6 + 2x^2 + 3$$

c.
$$3x^5 - x^3 + 6$$

d.
$$7x^3 + 3x + 5$$

2. Subtract $a^3 - 8a^2$ from $-6a^3 + a^2 - 5$.

a.
$$6a^3 + 9a^2 - 5$$

b.
$$-6a^3 + 9a^2 - 5$$

c.
$$7a^3 - 9a^2 - 5$$

d.
$$-7a^3 + 9a^2 - 5$$

- 3. Under which operation is the set of even numbers **NOT** closed?
 - a. addition

b. subtraction

c. multiplication

- d. division
- 4. What is the precision of 0.37 inches?
 - a. 2
- b. 3
- c. hundreds d.
 - l. hundredths
- 5. The *y*-intercept of the graph of 2x + 3y = 6 is:
 - a. -3
- b. 2
- c. 3
- d. 6
- 6. If f(x) = 3x 4 and $g(x) = x^2$, find the value of f(3) g(2). (3 points)

7. What transformations are required to make the graph of f(x) = |x| into the graph of f(x) = -2|x-5| + 3? *(4 points)*

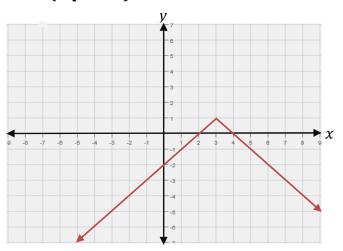
8 - 9 Simplify. (4 points each) 8. $(2xy^3)^4(-x^3y^2)^3$

8.
$$(2xy^3)^4(-x^3y^2)^3$$

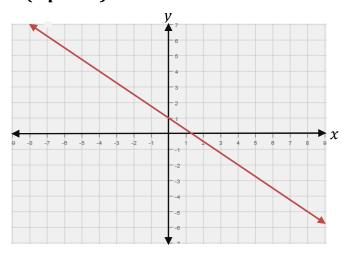
9.
$$5(2x^2 - 3x) + 3x(2x + 3) + x - 6$$

10 - 12 Name the graphed function.

(3 points) 10.



(3 points) 11.



(4 points) 12.

