Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Winter Vacation Homework

Make sure to show WORK for all the problems below. This will count as an OPEN NOTEBOOK QUIZ.

1. Graph the following equations.

EXAMPLE y = 4x – 3

YOUR TURN: y =

2. Solve for variable y. Reduce each fraction and arrange into y = mx + b form.



1. 2x – 4y = –8
2. 2y + 5x = 12



1. 2y + 3x = 6
2. 3y – 2x = 9
3. Find the **PRODUCT** of the following binomials.

EXAMPLE: (2x + 3)(x – 9)

4. Find the **SUM** of 4x2 – 12x + 11 and x2 + 3x – 9.

5. Find the **SUM** of 3x2 – 5x + 13 and –2x2 + 10x – 6

D. (x + 5)(x – 5)

E. (2x – 4)(x + 4)

F. (x – 3)(x2 – 5x + 7)

1. (x + 5)(x – 4)
2. (2x – 1)(x + 7)
3. (x – 3)(x + 8)

6. Solve for the value(s) of x. (keep in mind, some have more then 1 answer).

EXAMPLE: 3 – 4x = x + 17

A. 5x – 9 = 3x + 9

B. x – 5 = 6

C.

D.

E. 3x2 + 11 = 59

F.

7. Solve for the value of t.

8. Solve for the value of b. A = bh.

9. Use the Law of Exponents to simplify.

REMEMBER: when you multiply expressions, multiply the coefficient and add the variables.

When you divide, divide the coefficient (leave in a fraction if necessary) and subtract the variables.

Label the variable, exponent, and coefficient.

Example

1.
2.
3.
4.
5.