

# Weekly Review #19

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

Due Date #1: **Tues. 3/10** Due Date #2: **Fri. 3/13** (Regardless of whether you have class.)

- 1.) Using the substitution method, Alina solves the following system of equations using substitution.

$$2x - y = 5$$

$$3x + 3y = -3$$

Which equivalent equation could she use?

(A)  $3x + 2(2x - 5) = -3$  (C)  $3\left(y + \frac{5}{2}\right) + 2y = -3$

(B)  $3x + 2(5 - 2x) = -3$  (D)  $3\left(\frac{5}{2} - y\right) + 2y = -3$

- 2.) If the point  $(k, 2)$  is on the line whose equation is  $2x + 3y = 4$ , what is the value of  $k$ ?

(A) 1

(C) 0

(B) -1

(D)  $\frac{1}{2}$

- 3.) Which of the following is a factor of  $y^2 + y - 30$ ?

(A)  $y - 6$

(C)  $y + 6$

(B)  $y - 3$

(D)  $y + 3$

- 4.) If  $n$  represents an odd number, which computation results in an answer that is an even number?

(A)  $2n + 1$

(C)  $2n - 1$

(B)  $3n - 2$

(D)  $3n + 1$

- 5.) If  $f(x) = 2^x + 4$  and  $g(x) = x^2 - 4$ , the value of  $f(5) + g(-3)$  is

(A) 16

(C) 34

(B) 23

(D) 41

- 6.) Tyler spent \$55 buying songs and movies at an online store that charges \$1.25 for each song and \$2.75 for each movie. He purchased a total of 26 songs and movies combined. How many songs and how many movies did he buy?
- 7.) Solve for  $x$  in terms of  $a$  and  $b$ .  
 $ax = 15 + bx$
- 8.) The length of the shortest side of a right triangle is 6 inches. The lengths of the other two sides are consecutive even integers. Write and solve an equation that can be used to find the lengths of the other two sides of the triangle. This must be done algebraically to receive credit.

Use the information provided in the table to answer questions 9 and 10.

- 9.) Average weekly temperatures in central New York were recorded beginning April 1<sup>st</sup> as shown. Find a linear regression equation for this data. Round all coefficients to the *nearest hundredths*.

Number of Weeks Since April 1 <sup>st</sup>	Average Weekly Temperatures
1	50 degrees
2	52 degrees
3	55 degrees
4	61 degrees
5	65 degrees
6	68 degrees

- 10.) Based upon your regression equation, calculate the residual for week 4. Interpret this value.