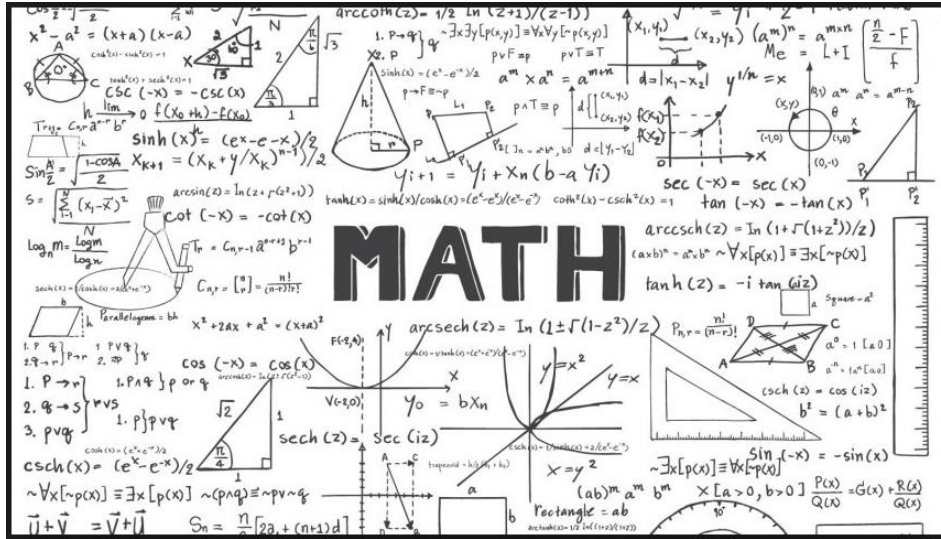


# Entering Algebra 2 2019



The purpose of this packet is to review basic skills needed for success in Algebra 2

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

Date: \_\_\_\_\_

### Items covered in this packet:

- Simplifying Polynomial Expressions
- Solving Equations
- Rearranging Formulas
- Simplifying Exponents
- Binomial Multiplication
- Factoring
- Radicals
- Graphing Lines (Slope intercept, Intercept Method or Rearranging.  $y = mx + b$ )
- Graphing and Solving Simultaneous Equations
- QR CODE Answer Key

ALL students will be expected to complete this review, show your work and be responsible for the information contained. Teachers will use these skills throughout the year in Algebra 2

Copies of this review are posted on the Stratford District Website.

<http://www.stratfordk12.org/parents/2019-summer-assignments>



## Simplifying Polynomial Expressions

1.  $8x - 9y + 16x + 12y$

2.  $14y + 22 - 15y^2 + 23y$

3.  $5n - (3 - 4n)$

4.  $-2(11b - 3)$

5.  $10q(16x + 11)$

6.  $-(5x - 6)$

7.  $3(18z - 4w) + 2(10z - 6w)$

8.  $(8c + 3) + 12(4c - 10)$

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

10.  $-(y - x) + 6(5x + 7)$

## Solving Equations

Solve each equation. You must show all work.

1.  $5x - 2 = 33$

2.  $140 = 4x + 36$

3.  $8(3x - 4) = 196$

4.  $45x - 720 + 15x = 60$

5.  $132 = 4(12x - 9)$

6.  $198 = 154 + 7x - 68$

7.  $-131 = -5(3x - 8) + 6x$

8.  $-7x - 10 = 18 + 3x$

9.  $12x + 8 - 15 = -2(3x - 82)$

10.  $-(12x - 6) = 12x + 6$

## Rearranging Formulas

Solve each equation for the specified variable.

1.  $Y + V = W$ , for  $V$

2.  $9wr = 81$ , for  $w$

3.  $2d - 3f = 9$ , for  $f$

4.  $dx + t = 10$ , for  $x$

5.  $P = (g - 9)180$ , for  $g$

6.  $4x + y - 5h = 10y + u$ , for  $x$

## Simplify Exponents

Simplify each expression.

1.  $(c^5)(c)(c^2)$

2.  $\frac{m^{15}}{m^3}$

3.  $(k^4)^5$

4.  $d^0$

5.  $(p^4q^2)(p^7q^5)$

6.  $\frac{45y^3z^{10}}{5y^3z}$

7.  $(-t^7)^3$

8.  $3f^3g^0$

9.  $(4h^5k^3)(15k^2h^3)$

10.  $\frac{12a^4b^6}{36ab^2c}$

11.  $(3m^2n)^4$

12.  $(12x^2y)^0$

13.  $(-5a^2b)(2ab^2c)(-3b)$

14.  $4x(2x^2y)^0$

15.  $(3x^4y)(2y^2)^3$

## Binomial Multiplication

Multiply. Write your answer in simplest form.

1.  $(x + 10)(x - 9)$

2.  $(x + 7)(x - 12)$

3.  $(x - 10)(x - 2)$

4.  $(x - 8)(x + 81)$

5.  $(2x - 1)(4x + 3)$

6.  $(-2x + 10)(-9x + 5)$

7.  $(-3x - 4)(2x + 4)$

8.  $(x + 10)^2$

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

10.  $(2x - 3)^2$

## Factoring

Factor each expression.

1.  $3x^2 + 6x$

2.  $4a^2b^2 - 16ab^3 + 8ab^2c$

3.  $x^2 - 25$

4.  $n^2 + 8n + 15$

5.  $g^2 - 9g + 20$

6.  $d^2 + 3d - 28$

7.  $z^2 - 7z - 30$

8.  $m^2 + 18m + 81$

9.  $4y^3 - 36y$

10.  $5k^2 + 30k - 135$

## Radicals

Simplify each radical.

1.  $\sqrt{121}$

2.  $\sqrt{90}$

3.  $\sqrt{175}$

4.  $\sqrt{288}$

5.  $\sqrt{486}$

6.  $2\sqrt{16}$

7.  $6\sqrt{500}$

8.  $3\sqrt{147}$

9.  $8\sqrt{475}$

10.  $\sqrt{\frac{125}{9}}$

## Finding the Slope of a line

1.  $(-1, 4)$  and  $(1, -2)$

2.  $(3, 5)$  and  $(-3, 1)$

3.  $(1, -3)$  and  $(-1, -2)$

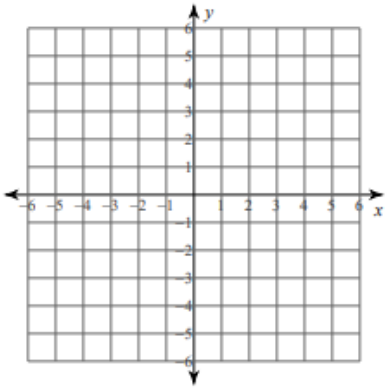
4.  $(2, -4)$  and  $(6, -4)$

5.  $(2, 1)$  and  $(-2, -3)$

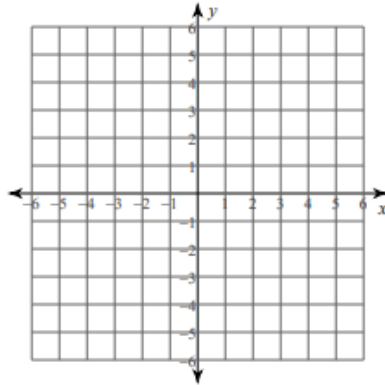
6.  $(5, -2)$  and  $(5, 7)$

Graphing Lines by either method *Slope Intercept, Intercepts or Rearranging.*

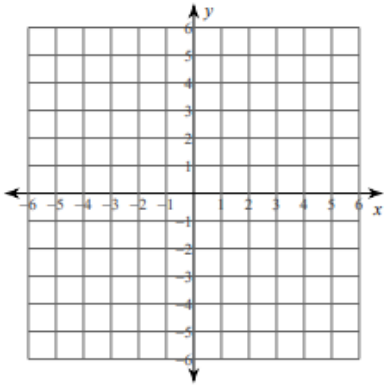
1)  $y = \frac{7}{2}x - 2$



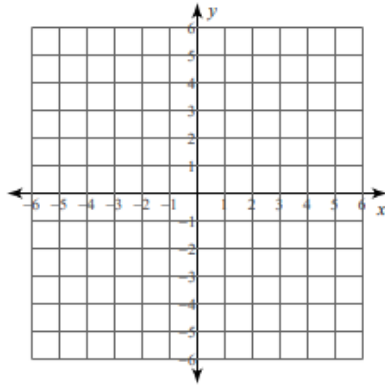
2)  $y = -6x + 3$



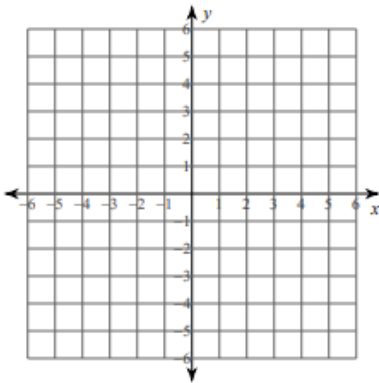
3)  $y = 4$



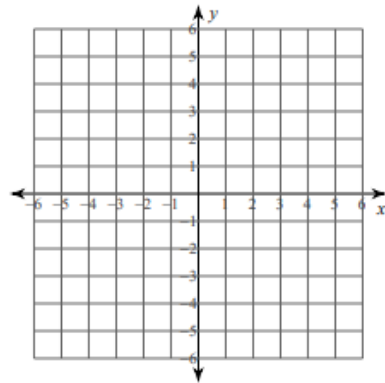
4)  $6x + 5y = 20$



5)  $x = -3$

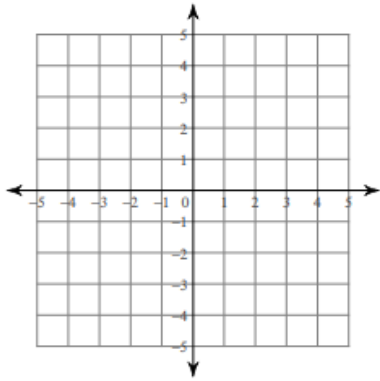


6)  $2x + y = 4$

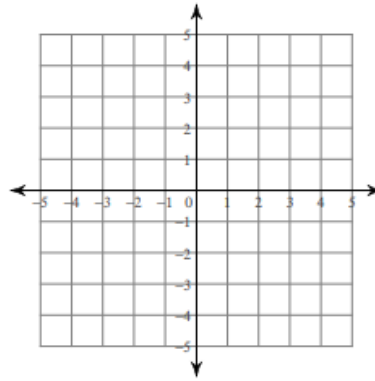


## Graphing and Solving Simultaneous Equations

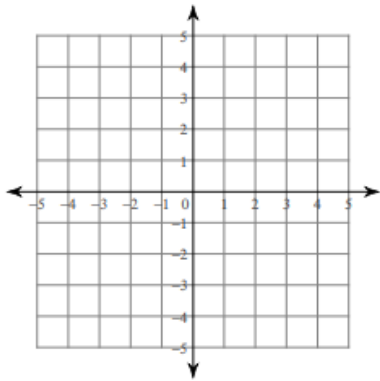
1)  $y = -3x + 4$   
 $y = 3x - 2$



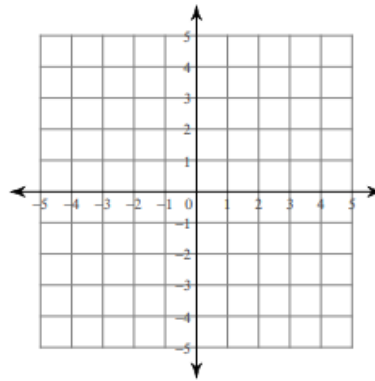
2)  $y = x + 2$   
 $x = -3$



3)  $x - y = 3$   
 $7x - y = -3$



4)  $4x + y = 2$   
 $x - y = 3$



5.

Castel and Gabriella are selling pies for a school fundraiser. Customers can buy apple pies and lemon meringue pies. Castel sold 6 apple pies and 4 lemon meringue pies for a total of \$80. Gabriella sold 6 apple pies and 5 lemon meringue pies for a total of \$94. What is the cost each of one apple pie and one lemon meringue pie?

# Entering Algebra 2

## Summer Answer Sheet 2019

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

Date: \_\_\_\_\_

<b>Simplifying Polynomial Expressions</b>	
1	2
3	4
5	6
7	8
9	10
<b>Solving Equations</b>	
1	2
3	4
5	6
7	8
9	10
<b>Rearranging Formulas</b>	
1	2
3	4
5	6
<b>Simplify Exponents</b>	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	



<b>Binomial Multiplication</b>	
1	2
3	4
5	6
7	8
9	10
<b>Factoring</b>	
1	2
3	4
5	6
7	8
9	10
<b>Radicals</b>	
1	2
3	4
5	6
7	8
9	10
<b>Finding the Slope of a line</b>	
1	2
3	4
5	6
<b>Graphing Lines by either method <i>Slope Intercept, Intercepts or Rearranging.</i></b> <b><i># 1 – 6 Teacher will check your graphing skills.</i></b>	
<b>Graphing and Solving Simultaneous Equations.</b> <b><i># 1 – 4 Teacher will check your graphing skills</i></b>	
#5	