

Name _____

Summer Packet 2019

1. Solve

$$-2x + 5 - 2x = 13$$

2. Solve

$$4x - 3(x - 2) = 21$$

3. Solve

$$7 + \frac{2}{3}x = -1$$

4. Solve

$$12p - 7 = -3p + 8$$

Name _____

Summer Packet 2019

5. Solve

$$4 - \frac{2}{3}x = -\frac{5}{3}x - 3$$

6. Solve

$$\frac{x+1}{7} = \frac{x-3}{2}$$

7.

Is the point $(-2, 0)$ a solution to the equation: $y = -2x + 4$

8.

Give the *slope* of the line that goes through the points:
 $(0, 8)$ and $(-1, 2)$

Name _____

Summer Packet 2019

9.

Give the *equation* of the line with a slope of -2 that goes through the point $(-5, -7)$

10.

Give the *equation* of the line that goes through the points: $(6, 2)$ and $(8, -4)$

11.

Give the *equation* of the line that is **parallel** to the line $y = -5x - 2$ and goes through the point $(3, -9)$.

12.

Give the *equation* of the line that is **perpendicular** to the line $y = -2x + 4$ and goes through the point $(4, -2)$.

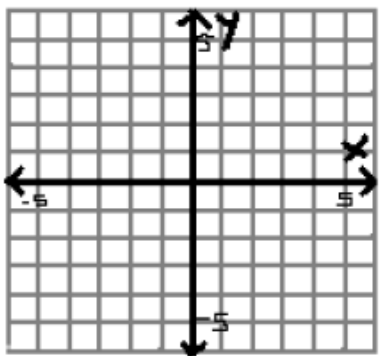
Name _____

Summer Packet 2019

13.

Solve the following system of equations by graphing:

$$\begin{cases} x + y = 2 \\ 2x - y = 4 \end{cases}$$



14.

Solve the following system of equations by substitution:

$$x = -2y + 4$$

$$-x + y = -7$$

15.

Solve the following system of equations by elimination:

$$3x - 2y = 1$$

$$2x + 2y = 4$$

16.

Solve the following system of equations by elimination:

$$x - 5y = 20$$

$$4x + 3y = 34$$

Name _____

Summer Packet 2019

17.

Solve the following system
of equations by elimination:

$$2x + 6y = 4$$

$$3x - 7y = 6$$

18. Simplify

$$-3m^3p^2 - 4m^4 + 6m^3p^2 + 2m^4$$

19. Simplify

$$(-x^2 - 5x - 1) - (-3x^2 + x - 1)$$

20. Simplify

$$(3x - 2)(4x - 3)$$

Name _____

Summer Packet 2019

21. Simplify

$$(3x + 4)^2$$

22. Simplify

$$(x - 3)(2x^2 + 6x - 4)$$

23. Factor

$$x^2 + 8x + 15$$

24. Factor

$$25x^2 - 64$$

Name _____

Summer Packet 2019

25. Factor

$$9x^2 + 30x + 25$$

26. Factor

$$2x^2 + 7x - 15$$

27. Simplify

$$\sqrt{18}$$

28. Simplify

$$\sqrt{27m^{10}x^9}$$

Name _____

Summer Packet 2019

29. Simplify

$$-\sqrt{2} \cdot 3\sqrt{6}$$

30. Simplify

$$2\sqrt{2x^5} \cdot 3\sqrt{14x^3}$$

31. Simplify

$$\sqrt{\frac{200x^6 p^4}{100x^4 p^3}}$$

32. Simplify

$$\frac{15}{\sqrt{3}}$$

Name _____

Summer Packet 2019

33. Simplify

$$-7\sqrt{5} + 3\sqrt{20}$$

34. Solve

$$2x^2 + 9 = 33$$

35. Solve

$$x^2 + 14x + 45 = 0$$

36. Solve

$$x^2 + 5x = 0$$

Name _____

Summer Packet 2019

37. Solve

$$5x^2 + 22x + 8 = 0$$

38. Solve

$$x^2 + 14x + 8 = 0$$

39. Solve

$$x^2 - 3x - 6 = 0$$

40. Solve

$$2x^2 - 6x + 3 = 0$$