

2022 Summer Packet for Students entering Geometry CP 322**Due Friday, 8/26**

Name: _____

Geometry 322

This packet contains the topics you have learned in your previous courses that are most important to geometry. Please read the directions, do the problems, and be prepared to turn this in on the first day of school.

I. Use Order of Operations to simplify each expression.

1. $16 - 2(4 + 1) + 5$

2. $(2 + 3)^2 + (6 - (-3))^2$

II. Solve the equation for x. Remember to show your work!

1. $6x + 30 = 18$

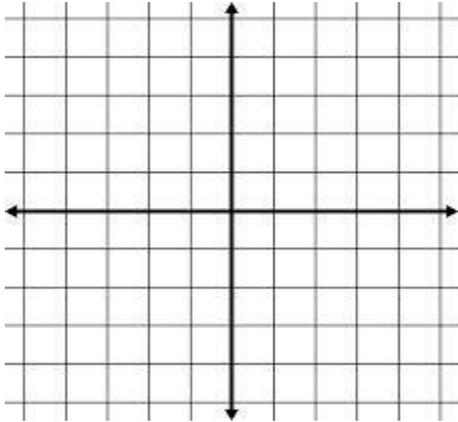
2. $2x + 5 = 6x - 23$

3. $3(x - 12) = -24$

4. $5 + \frac{2}{3}(x + 1) = 7$

III. Plot and label (using the letter) each ordered pair on the graph:

A (1, -3) B (-2, 5) C (0, 4) D (-3, 0)



IV. Factor

1. $6x + 10$

2. $x^2 - 9$

3. $x^2 - 10x + 21$

4. $6x^2 + 11x - 10$

V. Factor and solve each quadratic equation. Remember to show your work!

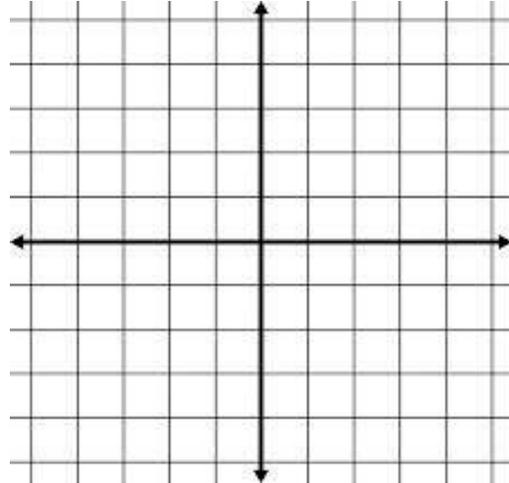
1. $x^2 + 6x + 8 = 0$

2. $x^2 - 5x = 24$

VI Solve the system of equations. Remember to show your work!

1. Solve by graphing each equation on the same set of axes to find the point of intersection. Write the solution as an ordered pair of numbers.

$$y = 3x - 1$$
$$x + y = 3$$



Solution: _____

2. Solve by an algebra method. Remember to show your work!
Write the solution as an ordered pair of numbers.

$$3x - y = 7$$
$$x + y = 5$$

Solution: _____

VII. Simplify the radical. Write the answer as a reduce radical.

1. $\sqrt{36}$

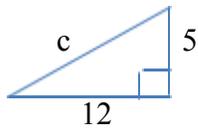
2. $\sqrt{100}$

3. $\sqrt{8}$

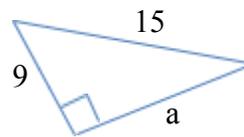
4. $\sqrt{27}$

VIII. Use the Pythagorean Theorem to find the missing side length.

1.



2.



IX. A team either won or lost each game in its 45 game season. If the team won 27 games, write the reduced ratio of wins to losses.