

Summer Packet for Students entering Geometry 328 Due: Friday August 23, 2024

Name: _____

This packet contains topics that you have learned in previous courses that are most important to know for this class. Please read the directions and **show your work** for each problem. Then write your answers on the answer sheet.

I. Use Order of Operations to simplify each expression.

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

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

II. Write the answer:

1. $(-3)(-4) =$ _____

2. $5 - 18 =$ _____

3. $\frac{3}{-9} =$ _____

4. $-24 + 17 =$ _____

5. $-2(5x - 8) =$ _____

6. $-8 - (-1) =$ _____

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

IV. Factor

1. $6x + 10$

2. $x^2 - 9$

3. $x^2 - 11x + 30$

4. $x^2 + 4x - 21$

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

1. $\sqrt{36}$

2. $\sqrt{100}$

3. $3\sqrt{25}$

4. $2\sqrt{16}$

5. $\sqrt{8}$

6. $\sqrt{27}$

VI. Distance and Midpoint

1. Use the distance formula to find the distance between the points: A (1, 10) and B (9, 4)

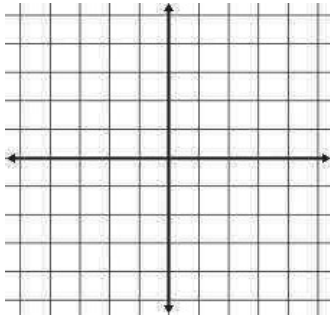
$$D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

2. Use the midpoint formula to find the coordinate of the midpoint between the points:
A (1, 10) and B (9, 4)

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

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

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



VIII Find the slope and y-intercept:

1. $2y = 6x - 2$

2. $3x + y = 1$

Slope = _____ y-intercept = _____

slope = _____ y-intercept = _____

Name: _____

I Use Order of operations to simplify each expression

1. _____

2. _____

II. Write the answer

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

III. Solve the equation for x

1. _____

2. _____

3. _____

4. _____

IV. Factor

1. _____

2. _____

3. _____

4. _____

V. Simplify the radical

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

VI. Distance and midpoint

1. _____

2. _____

VII. Plot and Label – DO THE WORK ON THE GRAPH

VIII. Find the slope and y-intercept

1. Slope = _____ y-intercept = _____

2. Slope = _____ y-intercept = _____