# GEOMETRY

## SUMMER LEARNING JOURNAL

MARION P. THOMAS

THE VILLAGE

EST. 1999

CHARTER SCHOOL

Name: _____

Teacher: _____

**Summer Geometry Learning Packet Overview**
**For Rising 10th Grade Students**

Welcome to your Geometry Summer Learning Packet! This packet is designed to help you review and strengthen key prerequisite skills needed for success in Geometry. Completing this work will ensure you start the school year confident, prepared, and ready to dive into new material.

Each section of this packet focuses on a specific foundational topic. At the top of each section, you will find a link to an **Edpuzzle lesson**. You must **watch and complete the Edpuzzle** before attempting the problems in that section of the packet. The Edpuzzle videos provide critical explanations, examples, and guided practice to support your understanding.

**Important Information:**

- **Both** the completed Edpuzzles and the physical packet will count toward your first **assessment grade** in Geometry
- Be sure to answer all questions carefully and show your work where required.
- Manage your time wisely and complete all sections before the first day of school.

By committing to this summer work, you are setting yourself up for a strong and successful year in Geometry. We look forward to seeing your hard work and growth when the new school year begins!

Eric Zavala, ezavala@mptcs.org

**Google Classroom Code**: 3gudj6iq

**Table of Contents**

**Part 1: Cartesian Plane Basics:**

1.1 Points, Lines, & Planes.....Page 4-5
1.2 Terminology and notation .....Page 6-7
1.3 Plotting points from table .....Page 8-9

**Part 2: Solving for Multi step equations and checking solution**

2.1 Solving linear equations (part1).....Pages 10-11
2.2 Solving linear equations (part 2) .....Page 12-13
2.3 Checking your solution.....Page 14-15

**Part 3: Graphing Linear equations**

3.1 Graphing by making a table .....Page 16-17
3.2 Graphing equations.....Page 18-19
3.3 slope, y and x intercept .....Page 20-22

## Part 1: Cartesian Plane Basics

| Section | Cartesian Plane Basics: | EdPuzzle Lesson |
|---|---|---|
| 1.1 | Points, Lines, & Planes | |

**1.1 Points, Lines and Planes**

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**"We Do" Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Draw and label a point. Give it a name using a capital letter.

Question 2: Draw a line and label it using two points with capital letters.

Question 3: Draw a plane and label it using three non-collinear points

Question 4: The figure shows a flat surface extending without end. Is it a point, line, or plane?

Question 5: The figure shows two points connected with a straight path that extends forever in both directions. Is it a point, line, or plane?

Question 6: The figure shows a single location in space represented with a dot and labeled A. Is it a point, line, or plane?

| Section | Cartesian Plane Basics | EdPuzzle Lesson |
|---|---|---|
| 1.2 | Terminology and notation | |

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**“We Do” Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Practice Questions**

Question 1: Name the four quadrants of the Cartesian plane and describe the sign of coordinates in each.

Question 2: Identify the x-axis and y-axis on a coordinate plane. What is the role of each axis?

Question 3: Write the coordinates of a point located 3 units to the right and 5 units down from the origin.

Question 4: Explain the difference between a point on the x-axis and a point on the y-axis using examples.

| Section | Cartesian Plane Basics | EdPuzzle Lesson |
|---|---|---|
| 1.3 | Plotting points: Ordered Pairs or Table | |

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**"We Do" Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Plot the following ordered pairs on a coordinate plane: (2, 3), (-1, -4), (0, 0), and (3, -2). Label each point

Question 2: Given the table of x and y values below, plot the points on the Cartesian plane:
x | -2 | -1 | 0 | 1 | 2 --|----|----|---|---|--- y | 4 | 1 | 0 | 1 | 4

Question 3: Plot and label the following points that form a rectangle: A(1, 2), B(1, 5), C(4, 5), and D(4, 2).

Question 4: Create a table of values for y = 2x - 1 for x = -2, -1, 0, 1, and 2. Then, plot the resulting points

| Section | Solving Multi-Step Equations & Checking Solutions | EdPuzzle Lesson |
|---|---|---|
| 2.1 | Solving Linear Equations with Variables on one side | |

**2.1 Solving Linear equations with variables on one side**

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**"We Do" Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Solve for x: 3x + 5 = 20

Question 2: Solve for x: 7x - 2 = 40

Question 3: Solve for x: x/4 + 3 = 6

Question 4: Solve for x: 5x = 2x + 12

| Section | Solving Multi-Step Equations & Checking Solutions | EdPuzzle Lesson |
|---|---|---|
| 2.2 | Solving Linear Equations with variables on both sides | |

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**“We Do” Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Solve for x: $3x + 4 = 2x + 10$

Question 2: Solve for x: $5x - 7 = 2x + 8$

Question 3: Solve for x: $4(x - 1) = 2x + 6$

Question 4: Solve for x: $6x + 3 = 3x + 12$

| Section | Solving Multi-Step Equations & Checking Solutions | EdPuzzle Lesson |
|---|---|---|
| 2.3 | Checking your solution | |

**2.3 : Checking your solution for multi step equation**

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**“We Do” Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Solve and check your solution: $2(x + 3) = 4x - 2$

Question 2: Solve and check your solution: $3x - 5 = 2(x + 1)$

Question 3: Solve and check your solution: $5(x - 1) + 2 = 3x + 4$

Question 4: Solve and check your solution: $4x + 3 = 2x + 9$

| Section | Graphing Linear Equations | EdPuzzle Lesson |
|---|---|---|
| 3.1 | Graphing by making a table | |

**3.1 : Graphing by making a table**

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**"We Do" Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Graph the equation $y = 2x + 1$ by making a table of values. Use at least 3 values of x.

Question 2: Graph the equation $y = -x + 4$ by creating a table of values. Choose values of x from -2 to 2

Question 3: Make a table of values and graph the equation $y = 0.5x - 2$.

Question 4: Create a table of values and graph the linear equation $y = -2x + 3$.

| Section | Graphing Linear Equations | EdPuzzle Lesson |
|---|---|---|
| 3.2 | Graphing Equations in Slope-Intercept Form | |

**3.2 Graphing equations in slope intercept form**

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**"We Do" Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Graph the equation y = 2x + 3. Identify the slope and y-intercept before graphing.

Question 2: Graph the equation y = -x + 1. What does the negative slope tell you about the line?

Question 3: Graph the equation y = 0.5x - 4. Label the y-intercept and use the slope to find a second point

Question 4: Graph the equation y = -2x. Identify both the slope and the y-intercept and show your graphing steps.

| Section | Graphing Linear Equations | EdPuzzle Lesson |
|---|---|---|
| 3.3 | 3.3 Identifying Slope, Y-intercepts, & X-intercepts | |

**3.3: Identifying slope, y interce[ts and x- intercepts**

**Teacher-Led Question**

Use the space to work through the problem with your teacher on the EdPuzzle.

**“We Do” Questions**

Use the space to work through the guided problems with your teacher on the EdPuzzle.

**Independent Questions**

Question 1: Given the equation $y = 3x - 6$, identify the slope, y-intercept, and x-intercept.

Question 2: Given the equation $y = -2x + 4$, identify the slope, y-intercept, and x-intercept.

Question 3: From the graph of the line, identify the slope, y-intercept, and x-intercept. (Assume graph is provided in class.)

Question 4: Given the table of values below, determine the slope, y-intercept, and x-intercept: x | -2 | -1 | 0 | 1 | 2 --|----|----|---|---|--- y | 2 | 4 | 6 | 8 |10

Question 5: Identify the slope, y-intercept, and x-intercept for the equation y = 0.5x + 5.

Question 6: Identify the slope, y-intercept, and x-intercept for the equation y = -x - 3.