

ALGEBRA II

SUMMER LEARNING JOURNAL



Name: _____

Teacher: _____

Summer Algebra II Learning Packet Overview For Rising 11th Grade Students

Welcome to Marion P. Thomas Charter School! This packet is designed to help you review and strengthen key prerequisite skills needed for success in Algebra II. Completing this work will ensure you start the school year confident and prepared for the challenges ahead.

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.

Format of the EdPuzzle:

- Direct Instruction: Teacher explains each step and gives 2 examples.
- Guided Practice: Teacher gives a problem and asks questions based on each step.
- Independent Practice: Student follows each step to solve the problems independently.

Important Information:

- **Both** the completed Edpuzzles and the physical packet will count toward your first **assessment grade** in Algebra II
- Be sure to answer all questions thoroughly and show your work where required in the Blank space in your packet.
- Stay organized and pace yourself throughout the summer to complete all sections before the first day of school.
- If the summer packet is not complete and submitted by the first day of school, **August 25th**, you will receive a mandatory week of detention including **SATURDAY**.
- Summer Packets will be submitted to your teacher (in person) during your first class.
- ****You will need to download the Edpuzzle app on your electronic device****

By dedicating time to review and practice these essential skills, you are setting yourself up for a strong and successful start in Algebra I. We look forward to seeing the hard work and effort you put into this summer assignment. If you have any questions, feel free to reach out to the following teachers:

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Google classroom code: ouwps3sx

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Section	Factoring quadratic equations and expressions	EdPuzzle Lesson
1.1	Factoring Quadratic Equations and expressions	

1.1
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

1. Factor the quadratic expression: $x^2 + 4x + 3$

2. Factor the quadratic equation: $x^2 - 9x + 20 = 0$

3. Factor the quadratic expression: $x^2 - x - 6$

Section	Combining like terms of expressions with exponents	EdPuzzle Lesson
1.2	Combining like terms of expressions with exponents	

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.


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Independent Questions

1. Simplify the expression: $6x^2 - 4 + 3x^2 + 2$

2. Simplify the expression: $7y^2 + 2 - 5y^2 + 4$

3. Simplify the expression: $2a^2 + 6b^2 - a^2 + 5b^2$

Section	Identifying the degree of a polynomial equation	EdPuzzle Lesson
1.3	Identifying the degree of a polynomial 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.


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Independent Practice Questions

1. Identify the degree of the polynomial: $2x^5 - 3x^2 + 8$

2. Identify the degree of the polynomial: $x^2 - 4x + 7$

3. Identify the degree of the polynomial: $7x^7 + 2x - 1$


Section	Identifying function notation	EdPuzzle Lesson
2.1	Identifying function 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:

1. If $f(x) = 3x - 2$, what is $f(5)$?
2. If $g(x) = x^2 + x$, what is $g(2)$?
3. If $h(x) = 6x + 4$, what is $h(-1)$?
4. If $k(x) = x^2 - 3x + 2$, what is $k(1)$?
5. If $m(x) = 2x^2 - x$, what is $m(3)$?

Section	Synthetic Division	EdPuzzle Lesson
2.2	Synthetic Division	

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:

1. Use synthetic division to divide $(x^3 + 4x^2 - 5x - 6) \div (x - 3)$

2. Use synthetic division to divide $(2x^3 - x^2 - 8x + 4) \div (x + 1)$

3. Use synthetic division to divide $(x^3 - 2x^2 - x + 2) \div (x - 2)$

Section	Finding the number of solutions of quadratic equations	EdPuzzle Lesson
3.1	Finding the number of solutions of Quadratic equations	

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:

1. Find the number of solutions for the quadratic equation: $x^2 - 6x + 9 = 0$

2. Find the number of solutions for the quadratic equation: $x^2 + x - 6 = 0$

3. Find the number of solutions for the quadratic equation $x^2 + 4x + 10 = 0$

Section	Solving for X when a quadratic equation is factor	EdPuzzle Lesson
3.2	Solving for x when a quadratic equation is factor	

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:

1. Solve for x: $(x - 7)(x + 1) = 0$

2. Solve for x: $(x + 3)(x - 2) = 0$

3. Solve for x: $(x - 8)(x - 5) = 0$