|  |  |  |  |
| --- | --- | --- | --- |
| ***Course Description:*** | | Algebra I with Probability is a course which builds upon algebraic concepts studied in the middle grades. It provides students with the necessary knowledge of algebra and probability for use in everyday life and in the subsequent study of mathematics. This is one of three courses required for all students. Students can obtain the essential content from this course either by taking the course after completing Geometry with Data Analysis in Grade 9 or by completing the middle school accelerated pathway. |  |
|  | |  |  |
| ***Course Objectives:*** | | Algebra I with Probability emphasizes functions including linear, absolute value, quadratic, and exponential; and functions as explicit and recursive. Properties of algebra are applied to convert between forms of expressions and to solve equations (factoring, completing the square, rules of powers, and radicals). Students will also be able to graph linear and quadratic functions. You will also be able to use probability to organize and analyze information. |  |
| ***Classroom Expectations:*** | | You are expected to conduct yourself in a respectful and productive manner. In addition to all the rules and expectations listed in the student handbook, I expect you to have a positive attitude, treat others with respect, practice self-discipline, and demonstrate responsibility. If these conditions are not met, you can expect one-on-one meetings with me, parent/instructor conferencing, and administrative action, if necessary.  I expect you to come to class with a growth-oriented mindset that is conducive to a positive learning environment for you and your fellow classmates. I also expect you to be respectful to your fellow classmates as well as myself during instruction. Be responsible for your own work and ensure that you make good choices each day.  **Concerning the use of cell phones and other electronic devices:**  Devices should be on silent and kept in your purse, backpack, or pocket during class unless otherwise instructed. You may not place it on your desk. Parents, guardians, and other family members should call the front office in case of emergency.  If you violate this rule, you can expect the following consequences:   * *First offense* – The phone or device will be placed in a phone chart at the front of the room. You may pick it up at the end of class. * *Second offense* – The phone or device will again be placed in a phone chart at the front of the room until the end of class and a parent/guardian will be notified. * *Third offense* – This is defiance and I will notify an administrator. |  |
| ***Grading Policy:*** | | Major assessments will count 70 percent of your grade. Homework and classwork will account for 30 percent of your grade. Grades will be updated weekly in PowerSchools. Each grading period will consist of nine weeks. |  |
|  | |  |  |
| ***Make-up Work Policy:*** | | Make-up tests will only be given to a student who has an excused absence. The student must make arrangements with the teacher to take a make-up test. Tests may be taken before school or during patriot path.  Homework/Classwork: It is the student’s responsibility to get their work assignments if they are absent from class. They will have two weeks from the date of the last absence to complete the work. Grades of zero will be assigned for assignments until the work has been completed. |  |
| ***Text and Other***  ***Required Reading:*** | | Larson, R., & Boswell, L. (2020). *Algebra 1 with Probability*. Big Ideas Learning. |  |
|  | |  |  |
| ***Materials and***  ***Supplies Needed:***  ***Laptops***  ***Accommodations*** | | Dedicated binder / spiral notebook / composition notebook  Concerning laptop utilization:  1.Student laptops should not be hard-wired to the network or have print capabilities.  2. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers.  3. Neither the teacher, nor the school is responsible for broken, stolen, or lost laptops.  4. Laptops and other electronic devices will be used at the individual discretion of the teacher.  Students accommodations will be followed for this course. |  |
| **Weeks 1 - 2** | **Unit 1 Solving Linear Equations**  Essential Question: How can we find the solution(s) to linear equations? | | |
| **Weeks 3 - 4** | **Unit 2 Solving Linear Inequalities**  Essential Question: How can we represent and solve problems involving linear inequalities? | | |
| **Week 5 - 6** | **Unit 3 Graphing Linear Functions**  Essential Question: How can we identify and visually represent the characteristics of a linear function on the coordinate plane? | | |
| **Week 7** | **Unit 4 Writing Linear Equations**  Essential Question: How can we use the characteristics of a linear graph to write a linear function? | | |
| **Week 8** | **Unit 5 Solving Systems of Equations**  Essential Question: How can we find the solution(s), where possible, of systems of linear equations using algebra and the coordinate plane? | | |
| **Week 9** | **Unit 6 Exponential Functions and Sequences**  Essential Question: How does an exponential rate of change differ from a linear rate of change? How are these differences represented graphically and symbolically? | | |
| **Week 10 - 11** | **Unit 7 Polynomial Equations and Factoring**  Essential Question: How can algebra be used to find the roots of polynomial equations? How are these roots represented on the coordinate plane? | | |
| **Week 12 - 13** | **Unit 8 Graphing Quadratic Functions**  Essential Question: How can draw connections between the different representations of quadratic functions? What patterns can we identify in these connections? | | |
| **Week 14 - 15** | **Unit 9 Solving Quadratic Functions**  Essential Question: What strategies can we identify to find the solutions for quadratic functions? | | |
| **Week 16 - 17** | **Unit 10 Probability**  Essential Question: How can we organize, compute, and interpret the results for the probabilities of independent and dependent events occurring? | | |
| **Week 18** | Review for Final | | |

**\*This is a tentative plan and may change at the discretion of the teacher.**

**Please sign below to acknowledge that you have received, read, and understood the syllabus.**

**Student name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Parent/guardian name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/guardian signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Parent/guardian, please provide two ways for me to contact you (email address, phone numbers):**

Parent/guardian Email:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Phone number:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_