Ms. Billerbeck

Class Syllabus: Algebra 1

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| John Adams Academy Vision Statement  The John Adams Academies are restoring America’s heritage by developing servant-leaders who are keepers and defenders of the principles of freedom for which our Founding Fathers pledged their lives, fortunes, and sacred honor. |
| Course Descriptions  Algebra 1is the first Course in a five--‐year sequence of college preparatory mathematics courses that starts with Algebra I and continues through Calculus.  This courseaims to deepen and extend student understanding built in previous courses by focusing on developing fluency with solving linear equations and inequalities and systems; extending these skills to solving quadratic and exponential functions; exploring functions, including sequences, graphically, numerically, symbolically and verbally; and using regression techniques to analyze the fit of models to distributions of data. On a daily basis, scholars in this courseuse problem solving strategies, questioning, investigating, analyzing critically, gathering and constructing evidence, and communicating rigorous arguments justifying their thinking. Scholars learn in collaboration with others, sharing information, expertise, and ideas. The course is well balanced between procedural fluency (algorithms and Basic skills), Deep conceptual understanding, Strategic competence (problem solving), and adaptive reasoning (extension and transference).  Course Objectives   * Represent a function with a graph, table, rule, and context and should be able to find any representation when provided one of the others (for linear, quadratic, and exponential relationships). * Symbolically manipulate expressions in order to solve problems, such as factoring, distributing, multiplying polynomials, expanding exponential expressions, etc. * Analyze the slope of a line multiple ways, including graphically, numerically, contextually (as a rate of change), and algebraically. * Solve simple and complex equations and inequalities using a variety of strategies, including rewriting (such as factoring, distributing, or completing the square), undoing (such as extracting the square root or subtracting a term from both sides of an equation), and looking inside (such as determining the possible values of the argument of an absolute value expression). * Solve a System of two linear or non--‐linear equations and inequalities with two variables using a variety of strategies, both graphically and algebraically. * Recognize and represent arithmetic and geometric sequences, including using tables, graphs, and either recursive or explicit formulas. * Construct exponential models and solve problems, and compare to linear models * Investigate a variety of functions including square root, cube root, absolute value, piecewise, step, and simple inverse functions. * Use function notation. * Collect, analyze, interpret, and make predictions from, two--‐variable data, including determining regression lines, correlation coefficient, and creating residual plots. * Understand the differences between association and causation, and to interpret correlation in context. * Compare distributions of one-variable data. |
| Mathematics Course Standards  The California Common Core Mathematic Standards can be found at <http://www.cde.ca.gov> |
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| Instructional Material/supplies   * 1.5” (1-1/2”) Three Ring Binder * Dividers * 8 ½ by 11 college-ruled binder paper * ¼ graph paper * Pencils * Compass * Protractor * Ruler * Scientific Calculator (No phone or graphing calculators) |

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| Classroom Conduct and Expectations  In order to be successful in this class a scholar will need to be responsible, have good attendance and have good study habits.  1) What it means to be responsible:   * Bring all required instructional material to class every day. * Do your homework. * Be to class on time. *(If you are tardy to class appropriate procedures will be followed as stated in the handbook.)*   2) What it means to have good attendance:   * Come to school every day. *(There will be days when you are sick or can’t come to school for other reasons and that’s understandable. The daily Homework will be posted on my page on my website* [*https://msbillerbeck.weebly.com/*](https://msbillerbeck.weebly.com/) *. Please make up any missed assessments due to an excused absence within 1 week of scholar’s return to school.)*   3) What it means to have good study habits:   * Be active in class. *(Paying attention, asking questions and being on task.)* * Doing your homework. * Coming in and getting help after school. *(I will almost always be available for tutoring help after school Monday – Thursday until 4:30 with a few exceptions.)*   Every scholar has the right to a safe, welcoming environment in which to learn. This means that I require scholar to be respectful. Respectful to each other, to the faculty, to staff and to the school. I expect every scholar to follow the school rules and guidelines as stated in the John Adams Academy handbook. |
| Assignments  Scholars should expect to spend 30 minutes to an hour every weeknight on homework. I strongly encourage the scholar to develop a regular study time and place. There will be times when the scholar will not have homework; this time should be spent on organizing and reviewing their notes and instructional materials. A list of the assignments can be found on my website at <https://msbillerbeck.weebly.com/> . I strongly encourage parents to review the weekly calendars with their scholar so that they can build a study plan for the week.  In order for a scholar to receive full credit on an assignment:   * The work must be complete, correct, in pencil, and *legible.* * The scholar’s assignment needs to be formatted per the attached example. * Scholars who miss 4 homework assignments will have after school detention with me.   Note: While I encourage students to work on their homework together, I expect individual work. No cheating or copying will be tolerated on any work. All scholars involved will earn a “0” on that assignment and a phone call home. |
| Quiz  The Scholar’s will have one to two quizzes per unit throughout the year. These quizzes will be based off of the Scholar’s classwork and homework. In addition, there will be one group quiz at the end of each chapter. |
| Tests  There will be one cumulative individual test per chapter in the textbook. |
| Make-up work   * Absent students will receive full credit for any make-up work completed within the allowed time. It is the policy of John Adams Academy that a scholar has two days to complete missed work for each day absent. * If a scholar knows that they are going to be gone it is strongly encouraged that the scholar comes and gets the homework ahead of time from the teacher. The grace period will still be honored if the student receives the work head of time. This will provide the scholar with a better opportunity of not falling behind while they are gone. * If the scholar misses a test or quiz they have one week to make it up once they return. Tests and quizzes cannot be given ahead of time. * Assignments that are due the day of the absence will be due the second day back. * If the scholar is planning on being gone two or more days, an independent study contract must be obtained by the scholar and brought to the teacher at least two days before the scholar leaves. The assignments will be due the second day back. More time will not be given. |
| Late work  Any work that is not cleared by an excused absence will be considered late. Late work will only be accepted for one week after the due date for half credit. |
| Extra Credit  The teacher may offer extra credit on occasion, but scholars and parents should not expect to replace missing or late work. Extra Credit will not be given on request. |
| Grading Policy  I have a weighted grading structure that puts a high value on assessments and homework. It is extremely important that the scholar completes their homework and practices good study habits in order to do well on tests or quizzes. It is highly recommended that both the scholar and the parent monitor the scholar’s grades closely online through the Academy website. Grades will be kept as current as possible. If there are any concerns please don’t hesitate to contact me.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Weighted Grading Structure**   |  |  | | --- | --- | | **Category** | **Percent** | | Tests | 40% | | Quizzes/Projects | 20% | | Homework/Participation | 20% | | Final | 15% | | Notes in Binder | 5% | | **Standard Grading Percentage**   |  |  | | --- | --- | | **Grade** | **Percent** | | A | 90% - 100% | | B | 80% - 89% | | C | 70% - 79% | | D | 60% - 69% | | F | Below 60% | | |
| Additional Information  I encourage both scholars and parents to contact me with any concerns or questions. I look forward to working with both the scholar and the parent to help prepare the scholar for their future. I am always happy to provide feedback on how a scholar is performing. I also reserve the right to modify any portion of this syllabus at any time. If the syllabus is modified both the scholar and the parent will be notified.  Thank you,  Ms. Billerbeck |

**FORMAT FOR HOMEWORK**

John Adams

11/11/07

Group #

Per 6

Asst #15: 2-1 through 2-10

1. Let n = a number

Given n + n2 = 30

n + n2 – 30= 0

(n + 6)(n – 5) = 0

n + 6 = 0 or n – 5 = 0

n = – 6 or n = 5

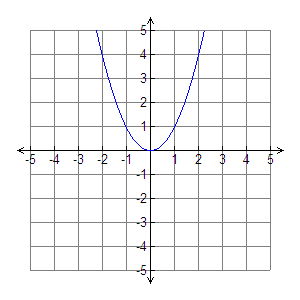
2.

3.

4.

5.

6.



7.

Write down the assignment here

Include the following:

* Assignment Number!!!
* Problem numbers

Securely staple all pages together in the correct order according to the way the problems are numbered.

Write your:

* Full name
* Due Date
* Group Number
* Period

* Work down the page in columns NOT across the page in rows.
* Show every step clearly.
* Clearly Box your answers.
* Work problems in numerical order.
* Put some spacing between each problem.

Draw all graphs on graph paper!

You may write on both sides.

It took Alex 7.25 hours to finish the homework assignment.

FOR WORD PROBLEMS YOUR ANSWER MUST BE WRITTEN IN A COMPLETE SENTENCE!

(decimals are allowed)

Dear Scholar and Parent,

Once you have read and understand the class syllabus. Please fill in and return this page to Ms. Billerbeck.

Thank you,

Ms. Billerbeck

We have read and understand the information in the class syllabus.

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| --- | --- | --- |
| Student Name | Student Signature | Student Email Address |
|  |  |  |
| Parent/Guardian’s name | Parent/Guardian’s Signature | Parent/Guardian’s Email Address |
|  |  |  |
| Parent/Guardian’s Phone Number  (Best one to reach you) | Parent/Guardian’s Phone Number  (Alternate) | Best Time to call |
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**Student Survey**

*Please fill out the following questions to the best of your ability.*

What was your past mathematical experience like? Circle one below

Great Good Okay Bad Traumatic

Explain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you study for your math tests and for how long? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are your expectations for this class?

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

My two mathematical strengths are 1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

My two mathematical weaknesses are 1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

List your hobbies, interests and/or sports you are involved in:

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

My favorite quote is: \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ By \_\_\_\_\_\_

What is your favorite book? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is one thing that you are proud of or that is interesting about you? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What else do you think I should know about you?