

ALGEBRA 1

Course Syllabus Fall 2016

Sharyland Pioneer High School

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I.Course Description:

Algebra I includes the introduction of variables, constants, expressions, equations, and functions. The language of numbers is examined. Topics include solving equations, simplifying expressions, understanding order of operations, performing operations with positive and negative numbers, exploring polynomials, factoring, graphing (linear and quadratic equations), working with radicals, and expanding arithmetic knowledge.

II. Course Objective:

Students will acquire and demonstrate knowledge of concepts, definitions, properties, and applications of the topics listed above as well as develop the computational skills and strategies needed to solve problems. Students will develop critical thinking and decision making skills by connecting concepts to practical applications.

III. Grading:

Major Assignments: 60% (tests and projects/presentations)

Minor Assignments: 40% (daily classwork/practices, homework, quizzes, binder check)

Note: For more details about grading and retesting policy, refer to Sharyland ISD Grading Guidelines available on the district webpage under the **Academia** tab)

IV. Materials:

2-inch binder with divider tabs

Loose leaf papers

Notebook

Pencils

V. Homework:

Homework assignments will be assigned on a regular basis. They may come in paper or electronic form. Each week, I will recommend assignments aligned with the current lessons on Khan Academy and you are expected to accomplish them on or before the due date. Paper homework assignments will be assigned as well to determine the extent of your mastery of the materials discussed in class.

VI. Quizzes

Quizzes are given to check student understanding of the concepts taught within several lessons. These quizzes will serve as a formative assessment of student learning and provide students feedback on their progress. It

will be important for students to utilize this feedback and if necessary, review the concepts and processes in which they are struggling to comprehend. It may also be necessary for students to receive additional assistance outside of class time (before/after school).

VI. Exams

A. Weekly exam (**60 %**) is administered (usually on a Friday) to assess what has been covered for the week.

B. Semester exams will be administered in the form of Cumulative Based Assessment (CBA) at the end of each semester (**20% of the final semester grade**).

VII. Projects

Projects may be assigned as a way to apply the mathematical concepts learned in class and it will be counted as a test grade with a weight of **60%**.

VIII. Tutoring Sessions/ Assistance:

Mathematics can sometimes be difficult and confusing. I do not want you to be frustrated or fall behind, so please ask questions and seek my assistance. Receiving extra assistance outside of class is a valuable resource that will help reduce any frustration or confusion and lead you to success in this course. I am eager to help you and will be available most days during the following times: before school (7:15 - 7:50 am) or after school (4:00 - 5:00 pm, Tuesdays and Thursdays). If these times will not work, please let me know and we can try to make arrangements to meet at an agreed time. If I'm not available, please see one of the other math teachers for assistance that are scheduled for tutorial sessions.

IX. Expectations:

Pre-AP Algebra 1 class offers students rigorous instruction while requiring students to meet a higher level of responsibility. The Pre-AP classroom is a place for learning and exploration. As such, it is important that each member work to create and maintain that environment. To that end each student is expected to:

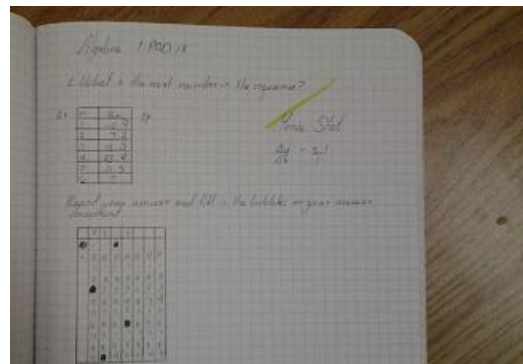
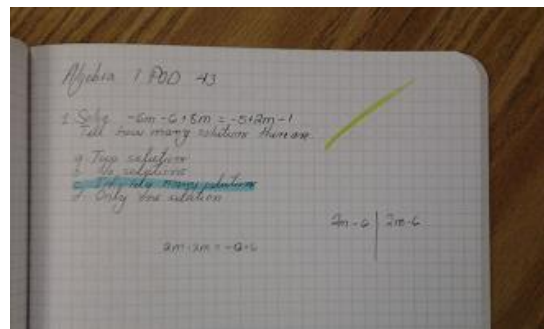
- Come to class on time, with all required materials, ready to learn;
- Complete assignments on time;
- Be positive and enthusiastic about learning. Encourage others as well;
- Take responsibility for your learning . Seek help when needed by meeting with the teacher or attending tutorial sessions;
- Respect each other, the teacher and the environment. Be respectful of my right to teach and everyone's right to learn;
- Have a good attendance;
- Follow school rules at all times inside the classroom. (with emphasis on cellphone use and dress code); and
- Strive to achieve to your greatest potential.

X. The New TEKS and STAAR Exams:

The current curriculum has been adjusted to meet the needs of the new Algebra 1 End of Course Exam known as the STAAR (State of Texas Assessment of Academic Readiness). To further prepare our Algebra 1 students for the Algebra 1 STAAR exam which counts for graduation, our students will be testing weekly via Study Island. The purpose for testing via an online resource is to better prepare our students for online testing which is how we test our students here Pioneer High School.

To further prepare our students for the upcoming STAAR exam, as students walk into their Algebra 1 class, a POD (Problem of the Day) will be projected onto a, Inter-write Whiteboard. The POD is in the form of a state tested objective that is tied into the previous day's lesson, or to set up a connection to upcoming tasks, goals, and criteria in the Algebra 1 curriculum and timeline. The students will get their composition books from their assigned area of the classroom and a graphing calculator and proceed to copy the POD. Students will be given a set amount of time to copy and work on the POD (5 to 7 minutes). The teacher will take between 3 to 5 minutes to check and discuss the POD. Roughly 10 to 12 minutes a day out of a 90 minute block will be spent on the POD's. This amounts to 600 minutes of exam review in the Fall semester and Spring Semester, and 1200 minutes of exam review for the 4th block and extended block classes. Through the use of POD's state exam preparation is acknowledged. (See figure 1 for example of composition book and POD's)

Figure 1 The use of composition books helps not just to get students ready for the Texas STAAR exams, but to link previously learned material to upcoming components of the state curriculum.



XI. Pearson Texas Algebra 1:

Sharyland ISD adopted new textbooks for the upcoming 2015-2016 instructional academic year. With respect to mathematics, Sharyland ISD adopted the Pearson Texas Algebra 1 textbook for Algebra 1. The table below shows the order in which the book will be taught.

Day 1 - 1-1 Multi-Step Equations	Day 31 - 3-3 Slope-Intercept Form
Day 2 - 1-2 Solve Var. Both Sides	Day 32 - 3-2 Direct Variation
Day 3 - 1-3 Literal Equations	Day 33 - Study Island Day
Day 4 - Study Island Day	Day 34 - 3-4 Point-Slope Form
Day 5 - 1-4 Proportions / 1-5 Similar Figures	Day 35 - 3-4 Point-Slope Form / Semester Exam 1 Rev.
Day 6 - 1-6 Solving Multi-Step Ineq.s	Day 36 - 3-5 Standard Form
Day 7 - 1-7 Compound Ineq.s (ands)	Day 37 - 3-6 Parallel and Perp. Line
Day 8 - 1-7 Compound Ineq.s (or's)	Day 38 - 3-7 Transformations and Lines
Day 9 - Study Island Day	Day 39 - 3-8 Scatter Plots
Day 10 - 5-1 Zero and Neg Exponents / 5-2 Mult. Power Same Base	Day 40 - Study Island Day
Day 11 - 5-3 More Mult. Properties / 5-4 Divide Prop.s Exponents	Day 41 - 4-1 Solving Systems (Graph)
Day 12 - 5-5 Rational Exponents and Radicals	Day 42 - 4-4 Apps of Linear Systems
Day 13 - 5-6 Simplifying Radicals	Day 43 - 4-5 Linear Inequalities
Day 14 - Study Island Day	Day 44 - 4-6 Systems of Linear Ineq.s
Day 15 - 2-1 Using Graphs to Relate / 2-2 Patterns and Linear Functions	Day 45 - Study Island Day
Day 16 - 2-5 Writing a Function Rule / 2-6 Formalizing Relations and Functions	Day 46 - 7-6 Factoring Tris. $A > 1$
Day 17 - 2-7 Using Function Notation	Day 47 - 7-5 Factoring Tris. $a = 1$
Day 18 - 2-3 Patterns and Non-Linear / 2-4 Graph a Function Rule	Day 48 - 7-7 Factoring Special Cases
Day 19 - Study Island Day	Day 49 - 7-9 Simplify Rational Exp.s
Day 20 - 9-1 Exponential Functions	Day 50 - 7.10 Divide Polys
Day 21 - 9-2 Exponential Growth/Decay	Day 51 - 8-3 Transformations of Quad.s
Day 22 - 9-3 Exponential Modeling	Day 52 - 8-4 Vertex Form of Quad.s
Day 23 - 6-1 Arithmetic and Geometric	Day 53 - Study Island Day
Day 24 - Study Island Day	Day 54 - 8-5 Solve Quadratic Eq.s / 8-6 Factoring to Solve Quad.s
Day 25 - 6-2 Arithmetic Rec	Day 55 - 8-7 Write Quad Functions

Day 26 - 6-3 Geometric in Recursive	Day 56 - 8-8 Completing the Square
Day 27 - 3-1 Rate of Change and Slope	Day 57 - 8-9 Quad Formula POD
Day 28 - Catch Up Day	Day 58 - Wrap Up / Catch Up
Day 29 - 3-1 Rate of Change and Slope	Day 59 - 7-8 Factoring by Grouping
Day 30 - 3-3 Slope-Intercept Form	Day 60 - 7-8 Factoring by Grouping

*Any sections not on the timeline will be taught via the POD's.