Bosque School Seventh Grade Algebra

Syllabus 2015-2016

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Classroom: M1

“A person who never made a **mistake,** never tried anything new." Albert Einstein

Algebra I is a comprehensive course that requires a fine balance between skills and conceptual understanding. To build the conceptual understanding students will be completing mathematical tasks during class to build connections between the concepts and apply what they are learning. **Students are asked to take risks and embrace challenges. Mistakes are part of that process. Please encourage your child to keep a growth mindset.** Overcoming obstacles leads to true growth and learning. In order to learn new skills, the students may receive lessons in class or via video. They will be able to practice their new skills on homework. I use a variety of worksheets, textbook problem-sets, and IXL for this practice.

*Course Description*: This class covers the fundamental concepts of beginning algebra. Algebraic concepts are viewed from varied perspectives to help students develop their abilities with abstraction and generalization. Application of knowledge is fundamental to each topic; this course emphasizes real-world problems that utilize elementary algebra, statistics, probability, and geometry. The content of the course focuses on the concept of variable, the four basic arithmetic operations from an algebraic perspective, linear equations and inequalities, the geometry of lines in the plane, and the concepts of distance, square roots, and absolute value. The course also studies the algebraic descriptions of lines in the plane, using slope intercept and linear combination forms of lines. Other topics include exponential growth and decay, compound interest, operations with polynomials, linear systems, and quadratics.

*Textbook*: The course uses Glencoe Algebra I 2012. An online version of the text is available. Please see my Web site for the link. In addition to the textbook, students may receive numerous handouts and/or packets derived from other sources. Students will have a textbook to keep at home and a copy to use in the classroom.

*Materials:*

* Planner, a student’s best friend
* Three ring binder with three dividers
* Graph paper
* Pencils and a pen for grading and corrections
* Ruler
* Scientific Calculator (TI-30XIIS) OR Graphing Calculator TI-84

(The graphing calculator is **not mandatory** for my classes, but it may be a good investment. The same model will be used in upper school mathematics, and may also be used on the SAT and ACT.

Used graphing calculators are readily available on e-bay, and can be purchased for about $45. A new one will cost $100- $120.)

Students will organize their materials in a binder with three sections labeled:

* Notes and Activities (all handouts, example problems, data sheets, vocabulary)
* Check-ins (Daily problem)
* Graded Work (Assignments, including homework and tests, that have been graded and corrected belong in this section.

*Grading:* Mastery Based Assessment (MBA) is used to evaluate student learning. With MBA, academic scores and student responsibilities are assessed separately. This system allows students, parents, and teachers to monitor student learning more accurately. Students are empowered because they know their strengths and areas of needed growth.

**4: Exceeding the Standard**

You consistently demonstrate a thorough understanding of this idea. You work independently and apply this skill in multiple situations. You can explain this to someone else.

**3: Meeting the Standard**

You understand the process or idea, but when you do it on your own you may miss a detail or occasionally get a wrong answer. Overall, your skills are strong.

**2: Progressing Toward the Standard**

You start to get the idea but you need some more practice. Your skills are developing.

**1: Little or no progress toward the Standard**

You try to follow, but it’s going too fast. You need more examples and a lot more practice. You’re not sure how to start and really need help.

Homework will be a critical part of the students’ mathematical journey. Homework will provide relevant practice for each standard and provide the student with the ability to assess his or her learning and know what questions to ask. Students will receive points for homework based on the rubric at the end of this document.

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| --- | --- |
| Average Scale Score Across Multiple Goals | Traditional Grade |
| 3.75 – 4.00 | A+ |
| 3.26 – 3.74 | A |
| 3.00 – 3.25 | A- |
| 2.84 - 2.99 | B+ |
| 2.67 – 2.83 | B |
| 2.50 – 2.66 | B- |
| 2.34 – 2.49 | C+ |
| 2.17 – 2.33 | C |
| 2.00 – 2.16 | C- |
| 1.76 – 1.99 | D+ |
| 1.26 – 1.75 | D |
| 1.00 – 1.25 | D- |
| Below 1 | F |

*Test Corrections and Test Retakes:* All students complete test corrections with explanations to learn from their mistakes and to help them prepare for the standards retake. The standards retake is similar to a test retake, but students only need to retake problems associated with the standards in which they earn a 2.5 or below. This gives the students another opportunity to earn a 3 on the standard. If the student wants to earn a 4, they can create their own assessment with high level problems and explain their thinking to me.

*Classroom Guidelines:* Students should come to class with all materials and with ALL homework problems attempted and graded if possible (please see homework instructions below). Students will write their homework assignment in their planner. The homework is also posted on my Web site in case a student is absent or loses his or her planner. Students should then put the assignment under “graded work” in the binder.

*I expect students to:*

Show respect toward their peers and community, be responsible, and be ready to participate. Students should follow the Bosque School Code of Conduct which can be found in the handbook. They should keep in mind the Bosque School core values of *scholarship, integrity*, and *community*.

Advanced students should participate in math competitions. They are also expected to encourage other students in their mathematical journey by recognizing that all students can reach the highest levels of math with practice and that the only difference between students is their experience with math. Some people have less and some have more, but all students can succeed.

**Math Homework Instructions**

This year you will check your homework before you come to class. There are many reasons this will benefit you. First, if you are getting the right answers, you will have confidence to continue. If you get a problem incorrect, you can work to find your mistake and you won’t make the same mistake on subsequent problems. This system is designed to empower you to continuously improve.

You will be given credit for the work you show on your homework and for correcting it before you come to class.

Step 1: Write the problem (if it is not a word problem) and complete it in pencil. Make sure you show your work.

Step 2: Check your answer in the back of the book. (If it’s not there, mark “NIB”.)

Step 3: Using a PEN, score your work. If you miss the problem, TRY IT AGAIN with a pen.

**✓Got it on the 1st try**

*I got the problem right the first time I tried. I completely understand the problem.*

**✓✓ Got it on the 2nd try**

*I got the problem wrong, did the problem over in PEN, and understand my mistake. I understand the problem now. You can see my original pencil work and corrections in pen.*

**x Still don’t get it**

*I tried my best, but the book says my answer is wrong. I can’t find my mistake. I will ask for help.*

Step 4: Repeat this process for each odd numbered homework problem.