

# ALGEBRA I & HONORS ALGEBRA – MATHEMATICS COURSE SYLLABUS

INSTRUCTOR: R. JENKINS, M.S., M.A.

## I. HOW TO STUDY AND LEARN ALGEBRA:

- a. Pick one type of problem and focus only on that type of problem,
  - i. I teach you the *specific* steps of how to factor Trinomials of the type  $Ax^2 + Bx + C$
- b. You are then going to do those types of problems using the same steps
  - i. Once you learn how to factor the trinomial, I give you specific practice problems to work on immediately (not 8-hours later). *The most critical part of this “learning process” is that you practice the specific techniques immediately as you are learning them!!*
  - ii. You need to know immediately whether you know how to do the material or not; you need to know the answer
  - iii. You come to me after the first one or two problems so I can check your work, or you can check your answers in my “teacher’s edition book” which will be open and on the big desk in front of the room. If you’re at home, check your answers in the back of your book.
- c. If you got the problem wrong, we will figure out where the problem is and then consciously correct it and you will learn it faster.
- d. The mental work is highly demanding,
  - i. You need to focus 100% without any distractions,
- e. This won’t be fun at first, but we will change any bad habits you may have and once it becomes a habit, you never have to worry about it again.
  - i. It’s challenging to learn new things, but very rewarding when you learn something difficult; then the learning process becomes habit.

The most important part of this relatively new learning process is the *work you do before you leave my classroom*. I will teach you how to do a problem and then you will practice immediately so we can see if you know the material before you go home. Learning math is like learning to shoot free-throws or even driving a car: You have to practice and be critiqued immediately so you can *consciously make corrections* as you learn the process. Watching someone else do it (even though it looks easy enough) and then trying to do it on your own several hours later is just wasting valuable time. Unfortunately most kids try to learn this way. You watch your instructor do the work on the board, you may or may not pay attention, and then the bell rings and you go home to start your homework (several hours later) and then realize you forgot how to do the work. Then you give up and come to class saying you forgot how to do the work.... That is not how it works in our class; you need to practice something *as you are learning it* in order to learn effectively and quickly. I promise you that you will learn everything I teach you if you follow the steps I use in the classroom!

I will also teach you techniques to prevent “test anxiety” as well as “test-taking strategies” so you never need to use the excuse “I don’t test well” again. Besides, academics are all about ‘testing’ so we need to learn to be proactive when preparing for exams.

## II. SUPPLIES NEEDED FOR CLASS:

- a. **Prentice Hall Mathematics Algebra I.** Copyright 2004 by Pearson Education, Inc. **ISBN 0-13-062567-1.**
- b. **Prentice Hall Mathematics Algebra I Practice Workbook.** **ISBN 0-13-063379-8.** (Don’t worry; we use it all the time!)
- c. **Graph Paper, we *do not use spiral notebook paper*,**
- d. Pencils and erasers,

- e. Standard Straight-edge Ruler,
- f. **Calculator; a Texas Instruments TI-83 plus Graphing Calculator or a Texas Instruments TI-84 Plus Graphing Calculator will be of great benefit.** They run about \$100.00 or slightly less, which I realize is a lot of money, but they can be used for every mathematics class you'll take while a student at Bishop Montgomery and you can buy a used one. Please put your name on it with a permanent pen. Once you buy the calculator, immediately put your name all over it with permanent marker pen so that you never lose it. I have compared our mathematics book (Algebra I level) to other school's books and our textbook is more challenging in most all cases. The first semester of Algebra, we rarely use the calculator, but during **the second semester of class when we are learning Trigonometry (for example), the calculations are too difficult and time-consuming to do the work by hand if we want to learn the complex-level problems.** However, every month we will have a 'back to basics' day where we do all calculations like addition / subtraction of fractions, long-division and percentages by hand / working memory.

III. **DISCIPLINE:** All students are held accountable to the highest standard of behavior in this class.

Students who lack impulse control, age appropriate maturity and draw attention to themselves by engaging in any type of negative behavior that disrupts the class in any way will be disciplined to the highest degree possible immediately (referrals). My goal is for every single student to enjoy the learning, the exchange of ideas and the occasional good-natured banter that fosters good class camaraderie. This is not possible if I have a student that engages in selfish, self-serving behavior. Food in the classroom, habitual disruption, constantly asking other students for supplies, being rude or selfish to others or even my constant request for you to change your behavior(s) will result in an eventual if not immediate referral. There is nothing that bothers me more than having to talk to a student several times about behaviors that I will not tolerate in my class. As soon as I think I may have a potential "problem student" in my class, I alert the Deans of Discipline and start documenting that student's behavior. I will NOT tolerate a student that constantly disrupts the class and upsets the learning environment.

IV. **CLASS RULES:**

- a. Students must be in their assigned seats BEFORE the bell rings. In more specific terms you must be in your seat when the bell starts to ring – if it's close, you will receive a violation; I don't want any sprinting to your seat as the bell rings – this is an automatic violation.
- b. There is to be no food / drink in the classroom or in the doorway to the classroom at any time. If I can see you are chewing food or drinking something while I am in my classroom (that means you could be near the doorway) you will receive a violation. If you leave a water bottle in the desk or on the floor, you will receive a violation.
- c. If I think you are "TEXTING" I will e-mail the appropriate Dean right away and they will come to the room sometime during that same period and go through your things and if they find a CELL PHONE or TEXTING DEVICE you will receive a referral and they will take away your phone / texting device.
- d. There will be no talking while I am lecturing or while a student is asking a question or giving an opinion. If, in my opinion, you are being rude by sighing or doing anything disrespectful, you will receive a violation. We will have a chat after class and if that type of behavior continues, you will receive a referral for being defiant.
- e. Students must remain in their seats at all times until the bell rings. If you are standing up putting your backpack on before the bell rings, you will receive a violation.

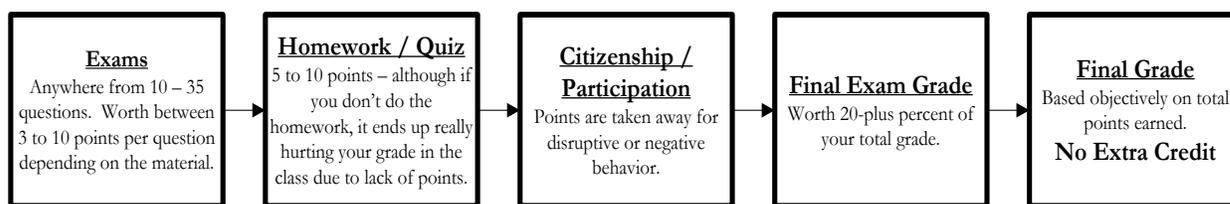
- f. All students are required to have something to write with and something to write on in addition to having your textbook, your workbook, and your calculator with every single day of class. If you don't bring all five items to class you will receive a ZERO for the day.
- g. During test days, if you have to get supplies or borrow a calculator you will automatically have 10% deducted from your grade on your exam. If you have to ask anyone for anything during an exam (erasure, white-out, etc.) you will have 10% deducted from your grade on the exam.
- h. Finally, any kind of cheating will be rewarded with a zero and a referral. You are a student at BMHS and I shouldn't even have to write this rule on the syllabus.

V. **EXTRA CREDIT:** *There is really no extra credit in my class.* However, if you find that I have made a significant error in explaining something and you alert me, I will reward you with 5-points for pointing out my mistake. I have no problem admitting a mistake and I welcome and reward your corrections.

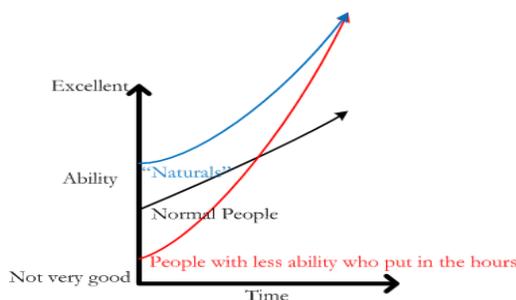
VI. **OVERVIEW OF THE CLASS:**

- a. Once the bell rings that means class has started. All students will have their homework on their desks immediately (if you constantly are late doing this, you will receive a violation).
- b. A student will come to the front of the room and read the answers. Once that has been completed, I will answer all questions regarding the homework to make sure all students understand exactly how to do the problems.
- c. I will check all home works to make sure you followed all the steps and you will keep your homework so you can study from it or if you think I didn't give you points for work you did, you now have proof of work.
- d. We will then start on the next section in the book and or workbook. I will go over several problems until it looks to me that you understand the material. I will always ask if several times if you have questions during the lecture. This is the time to learn the material.
- e. I will put the assignment on the whiteboard to the left of the classroom and you will immediately start your work / homework.
- f. During this very important time, you will do several repetitions working on the class work / homework problems and checking your work on each and every problem while you are learning the material. You need to come to my desk and get one on one help immediately while learning the material, or you can check your answers at the front of the room using the "teacher's edition" of our math book which has all the answers. Please realize this is the most important part of the learning process and you need to follow these steps to the letter so you can learn the material effectively and then be able to encode that material into your long-term memory. Many, many kids don't realize how important it is to practice while you're learning rather than waiting several hours before even attempting to do the work – that is a waste of time in most cases.
- g. I DO NOT expect your parents to be able to help you at home. They took Algebra many years ago and unless you constantly do math, you tend to forget the steps. It is MY JOB to teach you the material. I DO NOT expect you to need a tutor during the year because I will tutor you individually during the time the rest of the class is doing their class work / homework (which is the same thing). However, if you or your parents feel you need a tutor, I am completely OK with that, and will help your tutor anyway I can.

## How points are accumulated



VII. **UNDERSTANDING THE MATERIAL:** The difference between an “A” student and a “D” student is the number of math problems they have successfully completed. An “A” student will have done 1000 math problems (writing down each and every step), while the “D” student does less than 20% of that work and actually ‘skips steps’ because unconsciously they think they are saving time. There are some “outliers” that have special abilities when it comes to math, but they are NOT in our class so we will not address that type of student....



This is a graphic showing the time and effort needed to “catch up” to those excellent students but it is possible in most every case. I have never had a student who actually “put in great effort” and didn’t get great results. If you learn how to learn math, and do the work the way I ask you to, every student in my class can be an “A-student”.

Thomas Edison (born in 1847) was a brilliant scientist and inventor and was thrown out of school at 12-years old because he was thought to be dumb. They said he was terrible at math, unable to focus and had difficulties with words and speech. We now know that Edison was actually a brilliant, intelligent man despite his poor performance in school. His mother home-schooled him and he made the famous quote stating “Genius is 1% inspiration and 99% perspiration.” He was a very hard worker and sometimes worked 20-hour days, as most all successful people do. I don’t expect you to be ‘naturals’ when he comes to hard work, but if you parents and I ‘make’ you do the work, you will end up doing the work on your own after some time..... Supposedly this has been proven by Dr. Benjamin Bloom and his work is documented in the book “Talent Is Overrated”.

VIII. **GOALS OF THE CLASS:** The major goal is teaching students how to learn math (specifically Algebra). I want to give students detailed procedures to solve various types of problems, which include word problems. Students should focus on the process of learning and solving math problems. Focusing on the process itself takes away a good deal of the anxiety, and will increase the probability of a successful outcome. Students are required to complete most of their class work / home work in class, so that I can help them individually should they have questions.

IX. **EXAMS:** Exams will be given after each chapter or chapter sections if necessary. The exams will cover the information that is available in the text, plus any current information contained in lecture. Students are required to do all the homework assigned in each chapter as well as take notes on the steps you need to solve the problems. I will lecture on every item that will be on an exam. Quarterfinals and Final Exams are comprehensive. You will be tested on everything you have learned in the classroom – if I teach it to you, you will be expected to give correct answers when tested.

X. **LATE / MAKE-UP WORK:** When work is turned in late, the student will lose 50% of the grade they earned for each day it is late. It is your responsibility to get your work to me on time. If you miss an exam, it is your responsibility to come to me to make sure you make up the exam the day you come back. If you don't, you will receive a zero for your grade, permanently. Your grades are continually updated after every week, major assignment, and exam. You can always go online and see your current grade, as can your parents.

If you are going to miss an exam because you are going to be on a retreat (example only) then you may take the make-up exam (which will be more difficult) the day you come back to school. Please remember that if you do not come to me that day to ask for your make-up exam, you will receive a zero. It is your responsibility to know when all assignments and exams are going to be due. A “homework calendar” will be posted on the web site so you can always see what we will be working on in class if you have to miss a day or two of school. If you're really sick, stay home so you don't get your classmates sick – I understand that you are in no mood to do homework when you are feeling sick – so don't worry about doing it at home while you are sick; you will make up the assignment though.

XI. **GRADES & GRADING SCALE:** The grading scale is based on accumulated points. Your grades will be posted and updated after every exam or project and you will receive those scores within 24-hours. You will need to know your ID number to obtain your grades. Your grades will be found on my web site in the upper right hand corner of the page. Double click the “Grades Icon” and then double-click the “class period” you attend. The grade “order” is based on the person with the highest point-total who is on top, the person with the second most points in the class at the time is number two and so on.

**Grading Scale**

89.5%	–	100%	=	<b>A</b>
79.5%	–	89.4%	=	<b>B</b>
69.5%	–	79.4%	=	<b>C</b>
59.5 %	–	69.4%	=	<b>D</b>

XII. **OTHER POINTS OF INTEREST:** Although this can be a difficult class and earning consistent “A’s” on exams is challenging, students may still earn an “A” in the class by completing all the assignments on time with excellent detail in addition to receiving excellent grades on exams. In 20-years of teaching I've never had a student earn B's and A's without doing all of the homeworks assigned. It would be like trying to kick a field goal from 40-yards without any practice – it's not going to happen. The only way to learn math is to do many, many practice problems over time....

I will be available to meet with students or parents as requested. I do my absolute best to return all phone calls the day I receive them (assuming I get them). However, the best and most efficient way to get a hold of me quickly is to e-mail me at **RJenkins@BMHS-LA.org** and I will respond within hours. If you do this and you don't hear from me quickly, please assume there is something wrong with the server and perhaps call the counselor and they can shoot me NOTE right away and I will get back to you with whatever information you need. Although parents can easily find student's grades online 24 hours a day, I always include the student's grades with my responding e-mail.

You will have exams quizzes and homework which will determine your grade. However, your grade is based mainly on exam scores (as they are in college). You are the "cream of the crop" and I will treat you as such and I expect you to do well in my class. Once you have learned how to learn in my class and you have a good grasp of Algebra, all your future math classes will be that much easier. Once you have completed our Algebra 1 class at BMHS, I expect you to be able to pass the math portion of the California Exit Exam which is given to public school students before they are allowed to graduate high school.

### XIII. INTERNET RULES:

- Your current grade is always updated on my web page each week or after each exam (whichever is more frequent).
- You will get your **Pre-exam** questions online from my school web page (when I feel they are needed) which may be updated as we go through the material because new information comes up all the time that perhaps wasn't available to me when I wrote your exam and or term sheet at the time. You need to have that material with you when I begin lecturing on that section. This will help you follow along in class and keep you up-to-date on our work.
- You will also see our homework schedule on the web site. If you miss a day or more and you can't call a friend for the assignment, you can always look on the web site and find the homework for the each day of class – it is updated daily.
- You are *never* allowed to print mathematics class materials from the computer lab. If you do so, you will receive a zero for the assignment. Mrs. Kline knows my rules and if she sees work from my class coming out of her printer, we will have a problem. Print class materials from your home computer, a friend's computer, or Kinko's if necessary.
- E-mailed assignments are never accepted.
- You may e-mail me regarding any questions you have and I will get back to you with answers right away.

Finally, I will do whatever I can to help you succeed. If you are having problems with any area in your life and you need a "mulligan" let me know and I will get you the resources you need. If you feel like you can't come to me please speak one of the Choices Counselors. Sometimes I'll joke around with you a bit. If you think for one-second that I have hurt your feelings in anyway, please bring this to my attention somehow very soon. I am usually very aware of my student's demeanor and I can tell if you're having a bad day (most of the time, but not always) or you seem distant. If I think I may have struck a nerve or embarrassed you, I may speak with you about it later to make sure you are **NEVER** uncomfortable in my class at anytime.

## CONTRACT ASSIGNMENT

Worth: 30 points.

**Due: Friday, August 22, 2014**

- 1) **Print the last page of this document (page 7).** Go through the syllabus and give me a short summation of each of the 13 sections. Please use complete sentences so I can get an idea of your work. This assignment must be typed – don't worry about telling me the grading scale or anything to do with typing numbers or the graph.
- 2) Have a parent sign this page and you need to PRINT YOUR NAME so I know you have read and understand the expectations of the class.
- 3) **Staple both the contract first, and your summation second, and hand this in at the beginning of the period.**

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Parent Signature

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Date

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Student Printed Name

### HOW TO STUDY & LEARN ALGEBRA (NOT NEEDED ON SUMMATION)

- 1) Create an activity specifically designed to improve performance,
  - a. I teach you the specific steps of how to factor Trinomials of the type  $Ax^2 + Bx + C$
- 2) The activity needs to be repeated several times,
  - a. Once you learn how to factor the trinomial, I give you specific practice problems to work on immediately (not 8-hours later). The most critical part of this "learning process" is that you practice the specific techniques immediately as you are learning them!!
- 3) The activity needs immediate feedback,
  - a. You come to me after the first one or two problems so I can check your work, or you can check your answers in my "teacher's edition book" which will be open and on the big desk in front of the room. If you're at home, check your answers in the back of your book.
- 4) The "learner" consciously corrects their mistakes as they learn which speeds the learning process and better encodes the material into long-term memory.
- 5) The mental work is highly demanding,
  - a. You need to focus 100% without any distractions,
- 6) The work is not fun (at least at first) but becomes "intrinsically rewarding" with some time and effort,
  - a. It's challenging to learn new things, but very rewarding when you learn something difficult; then the learning process becomes habit.
- 7) You should do at least one-hour of math reps five nights per week. If you are done with your homework, do it again.
  - a. You can do the same problems over and over again just like you can shoot free-throws over and over again. In both cases, that is the only way you get better.
- 8) You should spend between 90-minutes and 180-minutes studying for a math exam. You should NOT stay up late studying for a math exam, but you should study until you go to bed so your brain can process the information while you sleep – this really works.

NOTE: If you turn in a copy of the original syllabus, you will receive an automatic zero for not following directions...