

Myths about Success in High School Mathematics

1. Reasons students think they should get A's:
 - If I do all my homework, I should get an A.
 - If I was an "A student" in middle school, I'll be an "A student" in high school.
 - All "good kids" get A's.
 - My grade is a measure of how hard I try.
2. If it's not in the textbook, I shouldn't have to learn it.
3. I can coast for a little while, then do more work at the end to catch up.
4. My calculator will help me to get the right answer.
5. Taking notes means writing down what my teacher writes on the board.
6. Since HW is not a significant part of my grade, I don't have to do it.
7. Memorization is the same thing as proficiency.
8. I can get all of my work for this class done during school and not have to spend any time at home on it.
9. I should not be expected to write in math class, use conventions of the English language, proper grammar or spelling because this is not English class.
10. Misconceptions about the role of your teacher:
 - My teacher is responsible for making sure I know how to do all the problems on a test before I take it.
 - My teacher should answer all my questions right away.
 - My teacher is the only source who can help me.
 - If I don't know how to do something, my teacher should show me how to do it.

Truths about Success in High School Mathematics

1. Students who get A's have an exceptional and exclusive combination of ability and work ethic. The average grade in high school math is a C.
2. Your teacher is required to teach to the state's content expectations. Your book may not address a certain content expectation or may not address it well. Your teacher may pull from a variety of resource material to present the best lessons possible.
3. Each new concept in math builds on what you have learned previously. You need to stay current with all the lessons to be able to be successful. Ask yourself: Would any basketball team be able to win a game by coasting through the first three quarters and then trying to do it's best in the last 12 minutes?
4. Calculators are often misused. This is a class in mathematics, not calculator button pushing or use of technology. Calculators used as a crutch often inhibit students from learning new material.
5. Taking notes means mentally (and verbally) participating in the learning process. If you write notes without understanding what you are writing on the paper, then there is no point to the exercise.
6. Homework is the practice required to do well on the assessments. Think about it: Would a football team ever say that they didn't have to practice because the practice didn't count toward their performance in the game?
7. Memorization is the lowest learning skill developed by students. High school math requires cognitive skills beyond memorization such as critical thinking and applying well known skills to new situations. In order to develop proficiency, students must be able to independently explain and justify each step of their work, not just regurgitate someone else's thought process.
8. Work done in school is the minimal expectation for you in order to succeed. To do really well, you will have to put in time outside of school in order to achieve and maintain a certain level of proficiency.
9. Mathematics is a form of communication that uses not only all of the skills learned in English class, but many more learned in math class as well.
10. Your teacher is your coach. Would a coach of a figure skater ever be asked to perform a routine in place of the athlete? Of course not.

Your teacher wants to help you to be independently proficient. There are times when your teacher will push you beyond your comfort zone in order to help you develop the skills you need to be able to do the work on your own.