

Math Project

Valley New School students are expected to earn 1.5 credits in math each year. Students must complete at least three high-school level math courses. Students will choose to enroll in Appleton eSchool coursework, ALEKS math, or Khan Academy as the basis for instruction in their project.

- 1) Students are expected to complete 1 course each school year, within the established Valley New School timelines. Daily math time will consist of at least 45 minutes/day within an established VNS math time.
- 2) Project binder will be personalized as a tool and include research proof of written practice, and focus skills.
- 3) Project will include a rationale, including focus skills, an end-of-project analysis, and assessment.
- 4) Math logs will include time worked, detailed analysis of learning AND a description of the math processes practiced using 'technical language' and/or rules.
 - o Example: "Whenever you multiply two terms with the same base, you can add the exponents- $x^3 + x^4 = x^{(3+4)}$ "
- 5) Students will seek assistance from tutors and advisors (and math teacher, if applicable) to understand math concepts and ensure steady progress.
- 6) Students will know and follow "Tips for ALEKS," Sparks Charts, and other resources for their coursework proven to improve efficiency and quality of the project.
- 7) Students will earn credit in math based on the formula below, in conjunction with the quality of the rubric at assessment.

Valley New School Math Credit Formula

$$[(\text{hours}/100 + \text{Objectives Completed}^*/\text{Total Possible Objectives}^{**}) / 2] \times 1.5$$

* *Objectives Completed* = (Total objectives – Number of objectives initial mastery) – Unfinished objectives

** *Total Possible Objectives* = Total Objectives – Number of objectives initial mastery

Completed courses = at least 1 credit

Tips for ALEKS

Stick to One Piece of Pie

It is healthier for you and your brain. Focusing on one subject at a time will help you build a solid foundation and will make math easier over time; however, do not forget about the other topics for too long. You should not have one piece of the pie complete while another has not been touched.

When Selecting an Objective, Look for Familiar Vocabulary

When you are deciding what to work on, look for words that you know. This is especially important when you are completing more than one objective in a day. If you finish an objective on percentages, do another about percentages. If you did one about graphing, do another about graphing. This will help you fully understand the subject you are working on, and you are less likely to forget it when it is time to do an assessment.

If New Objectives Appear, Do Them

Sometimes when you have completed several similar objectives, a new objective will pop up. Do it! These new objectives usually build on what you just learned. This means that it will be easier to do them now when everything is fresh in your mind, than later, when you may have forgotten something.

If It Does Not Make Sense, Do Not Do It

Math is logical. If you are looking at a problem, and it seems completely unfamiliar, you probably need more background material. Go back and do more objectives from that piece of your pie. Try the difficult objective again in a few days.

Do Not Review Today

Many students like to do the review problems on the same day that they do the objective. Don't. Review is meant to be a chance to prove that you understand the problem, that you really learned the material. Wait at least a day. Then, when you review, if you understand the problem, you will know that you learned the material.

Show Your Work

This is especially important when you are about to do an assessment. Once you understand a problem, write down how you solved it. It is okay if you copy down the steps given in the explanation, as long as you do not just read the printout. Then you have something to look back at during an assessment, to remind yourself what you learned. The act of writing will also help you remember the material later on.

Do More Problems

It is tempting to do as little math as possible. Most people do not like doing math anymore than you do, but doing more problems will make you better at math. It makes math much easier! Do all the problems. Do as many practice and review problems as you can, even when ALEKS offers you a chance to stop. Do both the review problems. This will make math easier in the long run.