

Scotts Valley High School Math Academy Application 2026

How to Apply

1. Complete the following sections.

Section 1: About You

Section 2: Challenge Problem

2. Follow these directions.

It is important to follow these directions because they make your application anonymous and easy to process, and also because the ability to follow written directions is an indicator that you are ready for the self-directed learning that takes place in Math Academy.

- Do each section on its own piece of paper. If you use more than one piece of paper for one section, use a staple.
- Type the About You section.
- Paper clip the two sections together, but do not staple the sections together.
- Write your student ID number at the top of each section. *Email SVHS to get an ID number if you do not go to school in Scotts Valley.*
- Do not write your name on any of the above pages.

3. Turn in your application.

If you go to school in Scotts Valley, turn your application in to your math teacher by March 13.

If you do not go to school in Scotts Valley, or if you miss the deadline, bring your application to the SVHS office by March 18.

For more information

For more information about the application and placement process, contact your teacher.

For more information about the Math Academy course, contact Erik Duffy at eduffy@scottsvalleyusd.org.

Families transferring from a school outside of Scotts Valley should contact Amy Paul at apaul@scottsvalleyusd.org.

Section 1: About You

Most high school students, of any grade, would find Math Academy to be rigorous and overwhelming, but for many students who take it, it is the most enjoyable class, despite (or because of) the challenge. Students recommended for Math Academy would easily get an A in Math 1 or Math 2 but not necessarily in Math Academy. The following questions will help give you, your family, and your teachers some insight into how well Math Academy might fit your learning style and interests. Please answer the following questions in about one paragraph each. Type your answers using complete sentences, and proofread your answers.

1. Share your experience with math during middle school, including your grades and interest in math. Based on this, what would you do if Math Academy turned out more challenging than you expected, you received a poor grade on a test, or you did not receive an A in the class?
2. In most classes, work done at home serves to review what was done in class. In Math Academy, students are more self-directed, and some material is learned at home, such as through homework problems based on concepts not directly covered in class. How do you feel about using resources (textbook, notes, friends, online sources, etc.) to work on problems that are based on, but different from, what you have experienced in class?
3. Most math classes involve learning ways to do specific things, but Math Academy is also about learning general concepts and then applying them in new situations. How would you feel about test questions that are based on reasoning about concepts learned in class rather than being similar to actual examples seen before?

Section 2: Challenge Problem

You have a red bead, a green bead, and a blue bead. If you line these up from first to last, there are six different possible orders: RGB, RBG, GRB, GBR, BRG, and BGR.

The Problems

1. If you add another red bead, then there are now 12 distinct orders, such as GRRB. List all 12 orders.
2. How many distinct orders are possible if you then add an additional two blue beads (for a total of six beads)?
3. What is the greatest number of beads you could add beyond these and still keep the number of distinct orders under 2000?
4. How many distinct bracelets could be made from these six beads?

The Task

Your job is to explore how to do these problems and explain your journey in figuring them out as best you can.

The Criteria

1. Do you seem to understand what you are doing, rather than writing things that don't make sense to you?
2. Can we follow your thought process in figuring things out so we can understand your journey?
3. Are you engaged and interested?

The Rules

It is up to you if you would like to reason out these problems on your own, use outside resources, or both. All resources are allowed, including discussing the problems with other people or getting help online from AI or other sources. However, there are two important rules:

1. Cite all information or ideas that came from another source, whether human or online.
2. Do not look at any information from any sources while you are writing.

The Purpose

The purpose of this part of the application is for you to see how you feel about taking learning into your own hands. If you are comfortable finding resources and asking questions, and you enjoy trying things out on your own, then Math Academy might be an enjoyable experience for you. But if this is stressful, and you find yourself wanting to copy work from online, this can help you decide that Math Academy may not be a class you would enjoy and benefit from.