



# Leveraging Strengths for Success in Math

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**Context:** out of class; Pre-Calculus

**Keywords:** goal setting, study skills, self-efficacy

**Student Activity Time:** 5-10 minutes

*Students reflected on their academic goals and personal strengths that can support their success in a pre-calculus course.*

## Introducing the Reflection Activity

After the first exam, students' confidence may fall anywhere in the range of completely confident and validated to uncertain of their skills or feeling defeated. An educator created an open-ended reflection prompt for students to complete on the course management tool after the first exam. The purpose of this activity was to affirm students' strengths and/or to remind them of their goals.

After administering the first course exam in Pre-calculus, an educator returned students' graded exams and posted an online writing assignment in response to their exam performance. The prompts were:

1. What are your academic goals?
2. What strengths can you use to learn math?

The assignment was graded for completion and the educator used the students' responses to include field-relevant applications to the course content. The responses were also used to help the educator talk about students' learning and methods to leverage their skills in the course. The meaning of the assignment can range for students, but many were able to put the course into the context of their life and were prepared to readily apply their strengths to ensuring success in the course.

## Recreating the Reflection Activity

	Description
1	Administer, grade, and return first course exam.
2	Post assignment prompts on the online course management system.
3	Grade and review student responses.
4	Utilize student responses in regular class meetings and office hours throughout the term.

## In the words of the Educator: Tips and Inspiration

*Use leading language to craft the question.* Take some time to think about your students and the class in order to customize the questions that you ask. Consider what you want to make students aware of - what's your angle? For me, leaving the question open-ended gives students a chance to talk about their goals for college, or their career goals, or even their GPA goals for that term. The activity is successful when you get them to think beyond doing the math for the class alone. Hopefully, they realize that this class is a part of their bigger goals, and the strengths that they have outside of this class can be used to help them with the class. Also, they begin to realize that they can use their strengths beyond this one class as well. The format of this question makes it personal to the students.

*Use students' answers in the class.* When students talk about their college and career goals, it gives me a chance to relate what we're doing in class to their field of interest. When I give feedback, it also gives me a chance to highlight how the specific strengths that students listed can be helpful in the class. Occasionally, students don't feel like they have useful strengths and I can also use that information to tell them what I've seen from them.

*What was the inspiration for the reflection activity?* I got this from the high school level education research about reflection and the idea of thinking about your learning. I also picked up some ideas for this from other educators and some research around stereotype threat. At one point, I was also realizing that I was spending a lot of time focusing on one or two things that students were missing it or getting wrong. I wasn't the one who really needed that knowledge; they needed to have that knowledge so that they could respond.

I can think of one student who was super quiet in class, and put out an aura of "stay away from me." When I read her response online about her goals, fears, and strengths, it really changed my interaction with that student. It was the first time I got some insight from her about who she was and what her experience was like in the class. Some students say things that are really personal. It's great to hear the students name their strengths, and realize that they can use those strengths in math. I see so many students who are uncomfortable with math, so helping them realize that their strengths can be useful in this class helps them gain confidence.