

Interview Questions for Focal Students

Initial Question	Follow-up Questions	Rationale
1. What do you like best about being in college?	What do you like to do outside of school?	
2. What is your favorite math class or topic that you have encountered so far?		
3. How has it been learning the language of Mathematics and Calculus? Do you easily understand your instructor, or are they using words you don't yet know?	Do you feel comfortable asking your instructor the meaning of a word? When you hear a word you don't know, how do you go about finding out what it means?	Address comfort levels with seeking clarification and strategies for understanding unfamiliar mathematical terms.
4. How do you retain the information you learn in class? What do you do after class to help you learn the material? How do you take notes in class?	Where do you find outside information? Do you use the textbook?	Examine post-class study habits and strategies, as well as sources for supplementary learning materials.
5. What is your experience with working in groups with other students?	<ul style="list-style-type: none"> ● How do you usually contribute when working in a group? ● Do you feel your ideas are listened to? Is your voice included? ● How does your group decide on the final answer? 	This question examines how well students collaborate in group work.
6. How do you prepare for class? Do you read/watch things provided by your instructor? Do you read outside materials?	<ul style="list-style-type: none"> ● Think of a student who is successful in Mathematics. What do they do to be successful? ● How much time do you allot outside of class to review or prepare for class? What do you think you need to 	Explore how students prepare for class and the resources they utilize, and investigate study habits and perception of what's necessary for success.

	<p>do to be successful?</p> <ul style="list-style-type: none"> • Do you prepare prior to coming to class? 	
7. We have been learning about derivatives in our calculus class. Can you think of examples where ideas from calculus show up in other classes or in life?	Can you think of a real-world job or technology that uses calculus principles?	
8. We'll have a break soon. When you are going away to spend time with family/friends, how will you explain to them what you are learning in your calculus class?		
9. Most of the time we are just using paper and pencil in math class. Thinking back over your experiences in previous math classes, have you experienced other ways of learning math? If so, how?	<ul style="list-style-type: none"> • Did you use manipulatives, tools, technology, go outside. • How about in other classes, what types of activities help you better learn a concept? 	
10. Can you remember any math classes where your personal experiences were used to explore a math concept?		
11. Can you remember any math classes where you moved around or otherwise used your body to help you explore a math concept?	If not, can you imagine using your body to learn math? How?	
12. When you get a new math problem to do, how do you feel?		Examine students' emotions when they deal with mathematics.

<p>13. How do you feel when you are stuck on a math concept or problem?</p>	<p>How do you deal with that feeling? How do you move forward in the work?</p>	
<p>14. How do you feel when you solve a hard math problem?</p>		
<p>15. One of the examples we work with a lot is moving objects and their velocities. How do you visualize/experience velocity?</p>		
<p>16. (hand out picture of beach with road and taco truck see next page): Imagine you are at the beach close to the water and you are hungry. There is a taco truck next to the road further up the beach (there is a paved sidewalk next to the road). If you want to get to the truck as quickly as possible, which way would you head?</p>	<ul style="list-style-type: none"> ● When we discuss a person walking from one terrain to another (like sand to pavement), how do you picture that motion mathematically? ● If you could measure your own walking speed across various surfaces, how might that data appear in a calculus graph? Can you draw a graph for me? ● (taco follow up) Do you think the most direct way is the fastest? 	<p>This question explores how students connect their body movements with mathematical concepts.</p>



Taco
Truck

O you