

You are at the forefront of the mathematics education of our youth. Take up the challenge, ask the hard questions, and challenge students to excel.

MATHEMATICS EDUCATION: WHERE DO I STAND?

Welcome to *Teaching and Learning Middle Grades Mathematics*! One purpose of this text is to assist you in developing or refining your own teaching philosophy. As a part of this effort, the text begins with a survey on issues related to mathematics and the teaching of mathematics.

For statements 1–20, indicate the extent to which you agree or disagree with the statement. Be prepared to share your thinking. Please save your responses because you will revisit your answers throughout the text to learn how your opinions evolve.

1. Mathematics is a collection of abstract ideas.	SD	D	N	A	SA	Key SD strongly disagree D disagree N neutral A agree SA strongly agree
2. For every mathematical problem, there is some procedure (or algorithm) to solve it.	SD	D	N	A	SA	
3. Mathematics must be applied to a real-life context to be of value.	SD	D	N	A	SA	
4. Mathematics must be taught sequentially because topics build on other topics in a particular order.	SD	D	N	A	SA	
5. Proof is too abstract for middle grades students.	SD	D	N	A	SA	
6. Everyone can learn mathematics.	SD	D	N	A	SA	
7. Students must learn skills before they can learn the reasons behind the skills.	SD	D	N	A	SA	
8. To do applications in mathematics, students must first master all of the prerequisite skills.	SD	D	N	A	SA	
9. To perform mathematical procedures correctly, students must understand the underlying concepts.	SD	D	N	A	SA	
10. Skill practice can be embedded in higher-level problem solving.	SD	D	N	A	SA	

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| 11. When students use calculators regularly, they become too reliant on them and forget how to think. | SD | D | N | A | SA |
| 12. It is valuable for students to talk with other students to help them learn mathematics. | SD | D | N | A | SA |
| 13. The availability of technological tools makes some mathematics more important to learn. | SD | D | N | A | SA |
| 14. Studying geometry means proving theorems. | SD | D | N | A | SA |
| 15. Middle grades students often need to use concrete materials to develop an understanding of mathematical concepts. | SD | D | N | A | SA |
| 16. Mathematics taught in integrated units is typically watered down. | SD | D | N | A | SA |
| 17. Mathematics teachers need to spend time preparing their students to take standardized tests. | SD | D | N | A | SA |
| 18. Teachers need to adapt textbook lessons to include problems of interest to their students. | SD | D | N | A | SA |
| 19. Students who score poorly on standardized exams should be tracked into remedial mathematics classes. | SD | D | N | A | SA |
| 20. It is important for mathematics teachers to plan lessons in consultation with other team members. | SD | D | N | A | SA |
| 21. In your opinion, what is mathematics? | | | | | |
| 22. How do you learn mathematical procedures? Mathematical concepts? | | | | | |
| 23. In your opinion, how do middle grades students learn mathematical procedures? Mathematical concepts? | | | | | |
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