

## 10 Myths That Hold Bright Math Students Back

These widely-held beliefs lead to decisions that prevent bright students from reaching their full mathematical potential. Each holds a grain of truth but hides a deeper truth.

### **Myth 1: Math is mainly about performing procedures accurately and quickly.**

*A grain of truth:* Procedural fluency is one of many components of math proficiency.

*The deeper truth:* Math is mainly about understanding, creating, and reasoning about patterns and relationships.

### **Myth 2: Mathematically talented people have special abilities that ordinary people lack.**

*A grain of truth:* People have different capacities for understanding and doing math.

*The deeper truth:* Math ability is changeable, and most people greatly underestimate their mathematical potential.

### **Myth 3: Acceleration is highly effective in meeting the needs of bright math students.**

*A grain of truth:* Acceleration meets some needs of some bright math students.

*The deeper truth:* Acceleration as often practiced *inhibits* many students' learning and growth in math.

### **Myth 4: Skill-based math tests can effectively measure bright students' abilities and learning.**

*A grain of truth:* Skill-based math tests provide some insight into bright students' abilities and learning.

*The deeper truth:* Skill-based math tests alone are insufficient and are often misinterpreted.

### **Myth 5: Elementary teachers do not need to understand math deeply.**

*A grain of truth:* Elementary teachers do not need extensive knowledge of secondary mathematics.

*The deeper truth:* All math teachers need and can gain deep knowledge around the content that they teach.

### **Myth 6: Bright math students' needs can be met entirely within mixed-ability classrooms.**

*A grain of truth:* All students can benefit when bright students take part in mixed-ability math classrooms.

*The deeper truth:* Bright math students also need frequent, focused opportunities to work with others who are thinking at similar levels.

### **Myth 7: Identifying needs of bright math students is necessarily harmful and elitist.**

*A grain of truth:* Elitism exists in gifted education and has harmful consequences.

*The deeper truth:* Identifying bright math students and meeting their needs can support *all* students' learning.

### **Myth 8: Bright math students often need just a little extra challenge.**

*A grain of truth:* Students should work only on math tasks that they can make conceptual sense of.

*The deeper truth:* Bright math students are capable of far more than we ask of them.

### **Myth 9: Bright students can learn math on their own.**

*A grain of truth:* Many bright students are good at learning certain aspects of math independently.

*The deeper truth:* Nearly all math students need significant guidance in order to fully develop their potential.

### **Myth 10: Bright math students deserve special opportunities and experiences.**

*A grain of truth:* All math students benefit from having a range of choices and opportunities.

*The deeper truth:* Experiences that target a student's needs should be treated as neither optional nor special.

Use this list to spark conversations!

#### **Questions to consider**

What does the myth sound and look like?

What are the consequences?

What can I do about it?