

Questions for the Mathematics Classroom

To help students reason mathematically, ask...

Why is that true?
Is it always true?
How would you prove that?
How did you reach your conclusion?
Can you create a model or diagram to show that?
What assumptions are you making?
Can you think of a counterexample?

To check student progress, ask...

Why did you choose this method?
Is there a more effective strategy?
Why did you organize your work like that?
Do you think this would work for other numbers?
Can you explain what you've done so far?
What else is there to do?

To help students make sense of others' work, ask...

Do you agree with ____? Why or why not?
How can convince the rest of us that your answer makes sense?
Do you have another way of explaining your result?

To encourage conjecturing, ask...

What would happen if...?
Do you see a pattern? Explain it.
Can you predict what will happen next?
What decision should be made?

To encourage reflection, ask...

How did you get your answer?
Does your answer seem reasonable? Why?
Can you describe your strategy to the rest of us?
What are the learning targets of this lesson?

Adapted from PBS TeacherLine, *Developing Mathematical Thinking with Effective Questions*

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