

Types of Teacher Questions

Question Type	Description	Example Questions
Type one: Gathering information and leading students through a procedure	Requires immediate answer Rehearses known facts procedures Enables students to state facts and procedures	What is the value of x in this equation? How would you plot that point?
Type two: Inserting terminology	Once ideas are under discussion, enables correct mathematical language to be used to talk about them	What is this called? How would we write this correctly?
Type three: Exploring mathematical meanings or relationships	Points to underlying mathematical relationships and meanings Makes links between mathematical ideas and representations	Where is x on the diagram? What does probability mean?
Type four: Probing and getting students to explain their thinking	Asks student to articulate, elaborate, or clarify ideas	How did you get 10? How do you know that? Can you explain your idea?
Type five: Generating discussion	Solicits contributions from other members of class	Can someone tell me or share with me another way that we could write the same formula to see if that works? I need some people who haven't participated to help me out. Do you think that means the same things? Is there another opinion about this? Why did you say that, Justin?
Type six: Linking and applying	Points to relationships among mathematical ideas and mathematics and other areas of study and life	In what other situations could you apply this? Where have we used this?
Type seven: Extending thinking	Extends the situation under discussion to other situations where similar ideas may be used.	Can we use them universally with all right triangles? Will this rule work with this equilateral triangle? Would this work with other numbers?
Type eight: Orienting and focusing	Helps students to focus on key elements or aspects of the situation in order to enable problem solving	Who can tell me what your task is? What is it you are trying to come up with? What did I ask you to find? What is the problem asking you? What is important about this?

Question Type	Description	Example Questions
Type nine: Establishing context	Talks about issues outside of mathematics in order to link back to mathematics	Where do you see triangles in real life? What is the lottery? How old do you have to be to play the lottery?

Source: Adapted from Boaler and Brodie, 2004.