

Framework for Different Types of Questions

Question Type	Description	Examples From the Father and Son Race Lesson Version 1
Probing students' thinking	<ul style="list-style-type: none"> Clarifies student thinking Enables students to elaborate on their own thinking for their own benefit and for the class 	<ul style="list-style-type: none"> So what are you doing? What are we talking about with accelerating? Time is standing still? Try to explain. So what is your thinking about this now?
Exploring mathematical meanings and relationships	<ul style="list-style-type: none"> Points to underlying mathematical relationships and meanings Makes links between mathematical ideas 	<ul style="list-style-type: none"> What was happening at the start of the race? Where are they when the race starts? What in the graph tells you that? What is happening with the speed? What's happening at B? Where are they at C? What does the "up" mean? Is there a point during this race where the son was running at a different rate?
Generating discussion	<ul style="list-style-type: none"> Enables other members of the class to contribute and comment on ideas under discussion 	<ul style="list-style-type: none"> Do you agree? So you agree it is faster? What does she mean by that? Why does she say "no"? Agree or disagree? Why?
Eliciting procedures or facts	<ul style="list-style-type: none"> Elicits a mathematical fact, procedure, or definition Requests the result (only) of a mathematical procedure Requests units or terminology Requires a yes-or-no or single-word answer 	<ul style="list-style-type: none"> At four what? Zero what? What do we call what is happening at A?
Inquiring about other mathematical topics	<ul style="list-style-type: none"> Relates to teaching and learning mathematics, but does not directly relate to the task or mathematical ideas of focus for the lesson 	<p>General examples (not from the lesson):</p> <ul style="list-style-type: none"> What else could you graph and find the point of intersection? How else could you label this graph?
Asking nonmathematical questions	<ul style="list-style-type: none"> Does not relate to teaching and learning mathematics May relate to the context of the lesson or task 	<p>General examples (not from the lesson):</p> <ul style="list-style-type: none"> Do you want to use graph paper? Who has competed in a race in track?

Source: Adapted from Boston, 2017.