

PART 2: Teaching and Learning of Mathematics

Part 2 contains three subsections, each asking you about your thoughts regarding teaching and learning mathematics. The sub-sections include:

- A. A Classroom Reflection
- B. Identifying Teaching Styles
- C. Views about Math

PART 2 Section A. Classroom Reflection

Instructions: Many people think the classroom is the best context for thinking about teaching and learning. Below is one classroom scenario with three of the teacher's statements underlined.

- Please read the scenario all the way through.
- Then, reread each underlined statement and think about each statement in the context of the entire scenario.
- For each statement answer the questions in the corresponding box at the end of the scenario. (For example statement A, box A). In each box you will be asked: **“What was the teacher doing? Was it good teaching or not? Why?”**

There are no right or wrong answers here — we are interested in learning your thoughts about what the teacher and the students are doing. Please explain your thinking as thoroughly as possible, so that we can understand your views.

SCENARIO

Ms. M, a fourth grade teacher, called on Joe, one of the 29 students in class. “Joe, what is problem 9?”

“Five divided by thirty-nine,” Joe replied.

2A.1. Ms. M. paused. “The problem in the book is $39 \div 5$, but let’s think about $5 \div 39$ for a minute. What would the answer to the problem $5 \div 39$ look like?”

All hands went up. Ms. M. called on Keesha. “Seven remainder four,” Keesha replied confidently.

“If the problem is five divided by thirty-nine, is seven remainder four the answer?” Ms. M. asked the class. The students all said that it was. Ms. M. waited for a moment.

T.C. spoke. “The number will be like – I say zero. You can’t divide five with a thirty-nine ‘cause it’s a higher number. You can’t divide a number that’s lower by one that’s higher.”

2A.2. Ms. M. looked at the other students and asked, “Is it true that you can’t divide a small number by a large number?”

“Yes, that’s true,” answered Al. “5 can’t divide by 39. If you had 39 kids and 5 dollars, you can’t do that in a fair way. You will give 1 dollar to 5 persons and the other people will be mad.”

Dan agreed. “He’s right, because the answer will be something about zero ‘cause there is no answer for a problem like that.”

“You cannot do 5 divided by 39,” Jackie added, “because on a calculator it won’t work out. It will come out to be a number in the minus. It will be.....” Jackie’s voice dropped, and she stopped.

“Is there another situation you can think of?” asked Ms. M.

“Well, 5 people and 39 desks,” offered Dan.

Cynthia spoke up. “What T.C. said is true. If there were 39 principals and I had 5 pieces of candy to give them, then only 5 principals could have a piece. The other 34 would be mad at me and I would lose my job.”

2A.3. “What about a different problem,” asked Ms. M., “what about 39 principals and 5 pizzas? Or 1 pizza and 4 kids?”

Each box below corresponds to one of the underlined statements in the scenario. Please comment on each statement taking into account the context of the entire scenario.

2A.1. What was the teacher doing? Was it good teaching or not? Why?

2A.2. What was the teacher doing? Was it good teaching or not? Why?

2A.3. What was the teacher doing? Was it good teaching or not? Why?

PLEASE CONTINUE TO THE NEXT PAGE FOR TWO ADDITIONAL QUESTIONS ABOUT THIS SCENARIO.

Please respond to the two questions below based on the scenario you have just read.

2A.4. What were the mathematical ideas involved in this classroom scenario?

2A.5. What can students learn in this class?