

Lesson 1 - Victim Functions

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- Springboard Course 3, pg.360 #8-9
 - Students check at their tables that their group mates have ordered pairs in the following format: (Input, Output)

Introduction

- Ask the class: What does the word “function” mean in English? They should arrive at the idea that it means something works.
- Define mathematically as on p. 362 of Springboard Course 3.
- Provide example of a teacher posting grades by student ID number and having different grades for the same student (not a function) vs. listing a student multiple times with the same grade (a function).
 - Students discuss whether these grade lists would function or not if I posted them in class.
- Refer to Exercise #1, and note that this oval mapping is another way we can represent relations, all inputs listed only once in the left oval and all outputs listed only once in the right oval. Students complete Exercise #1; discuss that this is a function.
- Play Triangle Shirtwaist Fire Introduction Video to introduce the unit.

Class Activity - Victim Lists

- Class Instruction for the Victim Lists
 - “Each group will be receiving a partial list of victims and information about them from this tragedy. I will tell your group what the input and output will be, and you will represent this information as a relation. I will ask your group to represent in one of three different ways: an input/output table, ordered pairs, or the mapping ovals that we saw in the exercise we went over.”
- Hand out one of each of the following pages for each group of 2-4 students with the given instruction for input, output and representation:
 - Page 1- last name, age represented by input/output table
 - Page 2- last name, cause of death represented by ordered pairs
 - Page 3- last name, age represented by mapping ovals
 - Page 4- age, cause of death represented by ordered pairs
 - Page 5- first name, cause of death represented by input/output table
 - Page 6- last name, cause of death represented by ordered pairs
 - Page 7- first name, cause of death represented by mapping ovals
 - Page 8- first name, cause of death represented by mapping ovals
 - Page 9- last name, cause of death represented by mapping ovals
 - Page 10- last name, first name represented by input/output table

- As student groups begin to wrap up, instruct them to discuss and explain underneath their relation representations whether they are functions or not.
 - Focus on whether these would be useful charts to create about the victims for people to look up information.
 - “Can we use the input to look up an output value effectively with respect to this real world scenario?”
- Choose a representative group by group to share aloud as time permits, highlighting common misconceptions. Solutions are as follows:
 - Page 1- last name, age represented by input/output table
 - Solution: NOT a function because one of the Bernsteins has a different age.
 - Page 2-last name, cause of death represented by ordered pairs
 - Solution: NOT a function because Brodsky has multiple causes of death.
 - Page 3-last name, age represented by mapping ovals
 - Solution: NOT a function because Goldstein has multiple ages.
 - Page 4-age, cause of death represented by ordered pairs
 - Solution: NOT a function because 18 year olds have multiple cause of death.
 - Page 5-first name, cause of death represented by input/output table
 - Solution: A function because each first name is only listed once.
 - Page 6- last name, cause of death represented by ordered pairs
 - Solution: NOT a function because Miale has multiple causes of death.
 - Page 7-first name, cause of death represented by mapping ovals
 - Solution: NOT a function because Annie has multiple causes of death.
 - Page 8-first name, cause of death represented by mapping ovals
 - Solution: A function because even though Jennie is listed multiple times, one cause of death.
 - Page 9-last name, cause of death represented by mapping ovals
 - Solution: A function because even though Saracino is listed multiple times, one cause of death.
 - Page 10-last name, first name represented by input/output table
 - Solution: A function because each last name is only listed once.

Check For Understanding

- Students complete Exercise #2.
- Teacher reads out the input and students respond in unison with output.
 - Do 2b first, and note how clear the response is which makes it a function.
 - Then do 2a and note that due to the confusion on how to respond for input of 1, this is not a function.

Homework

- Springboard Course 3, pg. 365 #11-17