

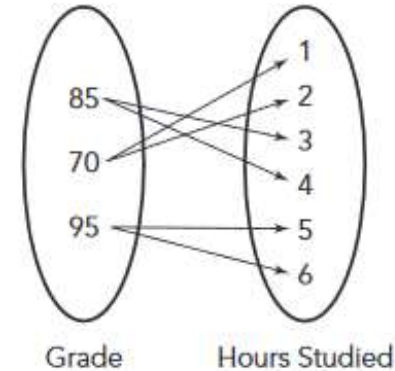
Write the term from the box that best completes each sentence.

scatter plot output relation input vertical line test
 mapping set domain range function

1. A(n) _____ is any set of ordered pairs or the mapping between a set of inputs and a set of outputs.
2. The first coordinate of an ordered pair in a relation is the _____.
3. The second coordinate of an ordered pair is the _____.
4. A(n) _____ maps each input to one and only one output.
5. A(n) _____ is a graph of a collection of ordered pairs.
6. The _____ is a visual method of determining whether a relation represented as a graph is a function by visualizing whether any vertical lines would intersect the graph of the relation at more than one point.
7. A(n) _____ shows objects in two sets connected together to represent a relationship between the two sets.
8. A(n) _____ is a collection of numbers, geometric figures, letters, or other objects that have some characteristic in common.
9. The _____ of a function is the set of all inputs of the function.
10. The _____ of a function is the set of all outputs of the function.

PRACTICE

11) A history teacher asks six of her students the number of hours that they studied for a recent test. The diagram shown maps the grades that they received on the test to the number of hours that they studied.



a. Is the relation a function? **Explain** why or why not.

b. Write the set of **ordered pairs** to represent this mapping.

c. Write out the **domain** and **range** for this relation.

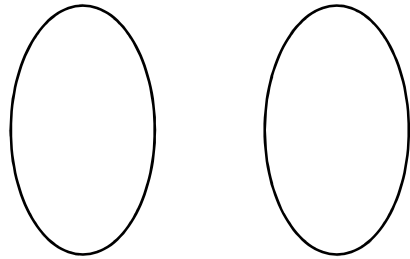
Domain: _____

Range: _____

12) The science teacher created the set of ordered pairs:

$$\{(100, 6), (90, 5), (80, 3), (70, 1), (90, 4), (80, 2)\}$$

These ordered pairs represent six students' grades on the midterm to hours studied. Create a mapping from the set of ordered pairs.



a. Is the relation a function? Explain why or why not.

b. List all the inputs (domain) and outputs (range) of the relation.

Input: _____

Output: _____

13) At the end of the year, a principal decides to create the mapping based on the information below (do not create the diagram).

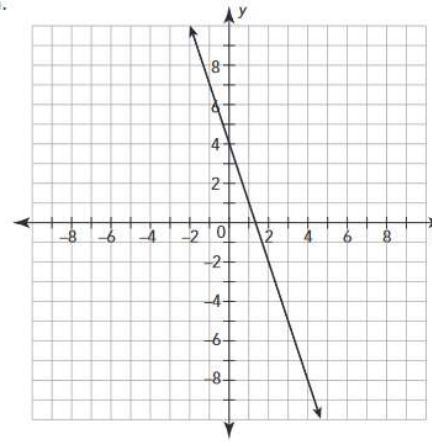
Input: The 82 total students in the history class

Output: the final grades they received for the class

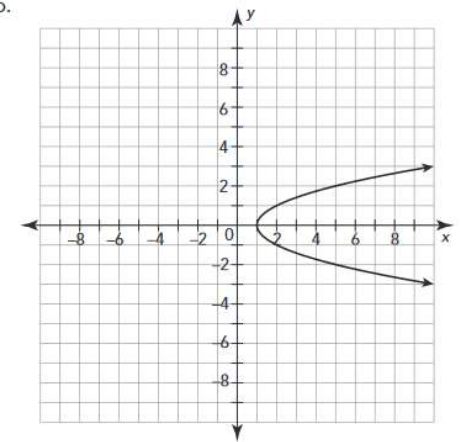
Does this mapping fit the definition of a function? Explain your reasoning.

14) Use the vertical line test to determine if each graph represents a function. Explain your reasoning.

a.



b.



REVIEW

15) Calculate the slope by using the slope formula for each table below.

x	y
2	-1
3	1.5
4	4
5	6.5

x	y
2	8
4	2
6	-4
9	-13

Show work: