Definition of a Function

Quick Review: A *function* as a rule that connects two quantities. We say that "*y* is a function of *x*" if each value of *x* gives only one value of *y*.

Example: If *N* stands for the number of tickets sold to the Spring Play at Williston, and *M* stands for the amount of money collected, then *M* is a function of *N* because each value of *N* produces just one value of *M*.

Example: If *M* stands for the final grades in Math of all Williston Juniors, and *E* stands for the final grades in English, then *M* is not a function of *E* because each value of *E* might be matched with several values of *M*.

Problems

1. For each situation decide (i) is *A* and function of *B*? (ii) is *B* a function of *A*?

   a. *A* is the height above ground of a passenger on a Ferris Wheel *B* minutes into the ride.

   b.

   c. *A* is the number of years after the year 2000 and *B* is the population of Easthampton.

   d.

   c. *A* is the temperature of a room in Fahrenheit degrees and *B* is the temperature of the room at the same time in Celsius degrees.

   d. *A* is the area of a square whose side has length *B*.

2. For each table of values decide if (i) A is a function of B or (ii)B a function of A or (iii) neither.

a.

A	3	6	2	-8	10
B	5	6	7	8	2

b.

A	1	2	3	4	5
B	1	2	3	4	5

c.

A	2	3	4	5	6
B	5	-5	5	-5	5

d.

A	1	2	3	2	1
B	-5	-6	-7	-8	-2