

Objective 60

Determine if a relation expressed as a table is a function.

PROBLEM



One or more of the tables represents y as a function of x . Which tables are they?

Table 1:

x	10	2	-2	-6
y	18	18	-6	-18

Table 2:

x	10	6	2	6
y	30	18	6	-6

Table 3:

x	10	2	-2	-6
y	30	18	6	-18

STEP 1

Recall the definition of a function.

A function is a relationship between two variables, in this case x and y , such that each value of x is associated with only one value of y .

STEP 2

Look at the first table. Decide if any value of x is associated with more than one value of y .

Table 1:

x	10	2	-2	-6
y	18	18	-6	-18

Each value of x is associated with only one value of y . This table represents a function.

STEP 3

Look at the second table. Decide if any value of x is associated with more than one value of y .

Table 2:

x	10	6	2	6
y	30	18	6	-6

The value 6 is associated with two different values, 18 and -6. This table does not represent a function.

STEP 4



Look at the third table. Decide if any value of x is associated with more than one value of y .

Table 3:

x	10	2	-2	-6
y	30	18	6	-18

Each value of x is associated with only one value of y . This table represents a function.

ANSWER

table 1 and table 3

Guided Practice:

1. One of the tables represents y as a function of x . Which table is it?

[A]

x	7	2	-3	-8
y	2	-3	2	-13

[B]

x	7	-3	-8	-3
y	2	-3	-8	-13

[C]

x	7	2	-3	7
y	2	-3	-8	-13

2. One or more of the tables represents y as a function of x . Which tables are they?

Table 1:

x	-9	-12	-15	-18
y	-5	-8	-11	-14

Table 2:

x	-9	-12	-15	-15
y	-5	-8	-11	-14

Table 3:

x	-9	-12	-12	-21
y	-5	-8	-14	-17

Independent Practice:

3. One of the tables represents y as a function of x . Which table is it?

[A]

x	7	11	9	7
y	39	33	27	21

[B]

x	13	11	9	7
y	39	33	39	21

[C]

x	13	11	9	13
y	39	33	27	21

4. One or more of the tables represents y as a function of x . Which tables are they?

Table 1:

x	-2	-6	-10	-18
y	-3	-7	-11	-15

Table 2:

x	-2	-10	-14	-18
y	-3	-7	-15	-19

Table 3:

x	-2	-6	-6	-18
y	-3	-7	-15	-19

Additional Help:

<http://www.virtualnerd.com/algebra-1/relations-functions/identify-difference.php>

<http://www.brightstorm.com/math/algebra/graphs-and-functions/relations-and-determining-whether-a-relation-is-a-function/>

https://www.youtube.com/watch?v=1Ww6U_uY6A