Name __Schlansky__   Date _____
Mr. Schlansky   Pre Calculus

Relations, Functions, and One-To-One Functions

Determine whether the following a functions, one to one functions, or not a function.

1. $\{(2,4),(1,2),(0,0),(-1,2),(-2,4)\}$

Function, not 1-1

2. $\{(2,2),(1,1),(0,0),(1,-1),(2,-2)\}$

Not a function

3. $\{(1,2),(3,4),(4,3),(2,1)\}$

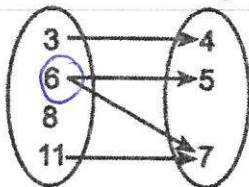1-1 Function

4. $\{(0,2),(3,4),(0,8),(5,6)\}$

Not a function

5. $\{(3,-2),(-2,3),(4,-1),(-1,4)\}$
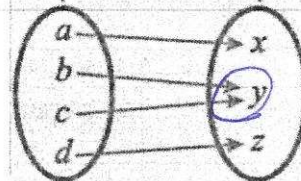
1-1 Function

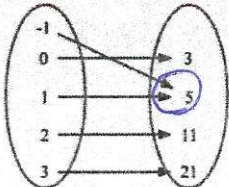6. $\{(1,0),(2,0),(3,0),(4,0)\}$
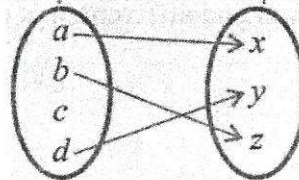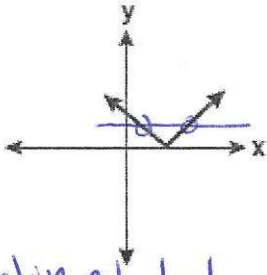
Function, not 1-1

7.

Not a function

8.

Function, not 1-1
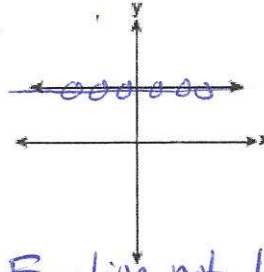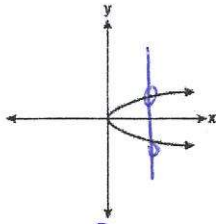
9.

Function, not 1-1
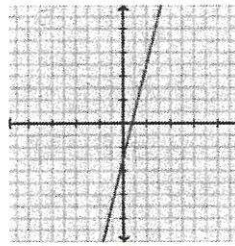
10.

1-1 Function

11.

Function, not 1-1

12.

Function, not 1-1

13.

Not a function

14.

1-1 Function

15. A mapping is shown in the diagram below.
This mapping is

1) a function, because Feb has two
   outputs, 28 and 29

2) a function, because two inputs, Jan and
   Mar, result in the output 31

3) not a function, because Feb has two
   outputs, 28 and 29

4) not a function, because two inputs, Jan
   and Mar, result in the output 31

Jan
Feb
Mar
Apr

28
29
30
31
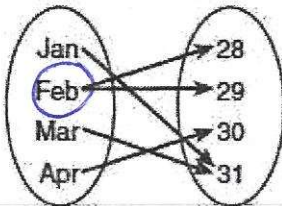
16. Which relation represents a function that is *not* one to one?

1-1

1)

x	1	2	3	4	5	6
y	3.2	4	5.1	6	7.4	8.8

1-1

3) $y = 3\sqrt{x+1} - 2$ 1-1

2)

4)

1
2
3

4
5
6
7
8
9

Not a function