

Domain and Range – Discrete Data

Fill in the domain and range for each of the following. Label each as a function or relation.

A. Ordered Pairs

1. $(3, 2)$ $(5, -2)$ $(4, 3)$ $(7, -6)$

Domain: $\{3, 4, 5, 7\}$
Range: $\{-6, -2, 2, 3\}$
Function? Yes

2. $(5, -2)$ $(4, 8)$ $(4, 2)$ $(7, 6)$

Domain: $\{4, 5, 7\}$
Range: $\{-2, 2, 6, 8\}$
Function? No

3. $(-5, 2)$ $(8, 2)$ $(4, 2)$ $(-3, 2)$

Domain: $\{-5, -3, 4, 8\}$
Range: $\{2\}$
Function? Yes

4. $(-7, 4)$ $(5, 2)$ $(-7, 4)$ $(8, 2)$

Domain: $\{-7, 5, 8\}$
Range: $\{2, 4\}$
Function? Yes

B. Table

1.

x	-5	-3	6	-2
f(x)	4	-3	-2	5

Domain: $\{-5, -3, -2, 6\}$
Range: $\{-3, -2, 4, 5\}$
Function? Yes

2.

x	-4	-2	10	-12
f(x)	4	-2	-2	4

Domain: $\{-12, -4, -2, 10\}$
Range: $\{-2, 4\}$
Function? Yes

3.

x	-5	-3	-5	-2
f(x)	4	-3	-4	6

Domain: $\{-5, -3, -2\}$
Range: $\{-4, -3, 4, 6\}$
Function? No

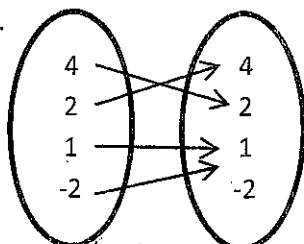
4.

x	-3	3	-3	4
f(x)	2	-2	2	-2

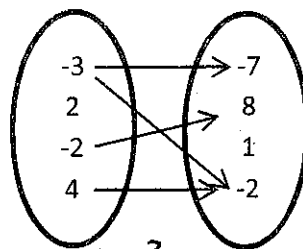
Domain: $\{-3, 3, 4\}$
Range: $\{-2, 2\}$
Function? Yes

C. Mapping Diagram

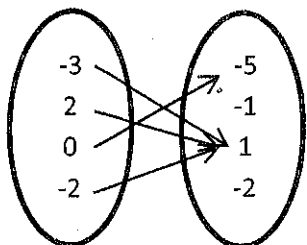
1.



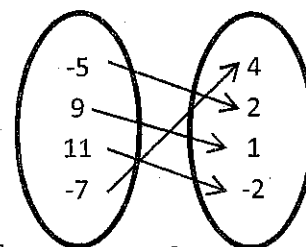
Domain: $\{-2, 1, 2, 4\}$
 Range: $\{1, 2, 4\}$
 Function? Yes



Domain: $\{-3, -2, 4\}$
 Range: $\{-7, -2, 8\}$
 Function? No

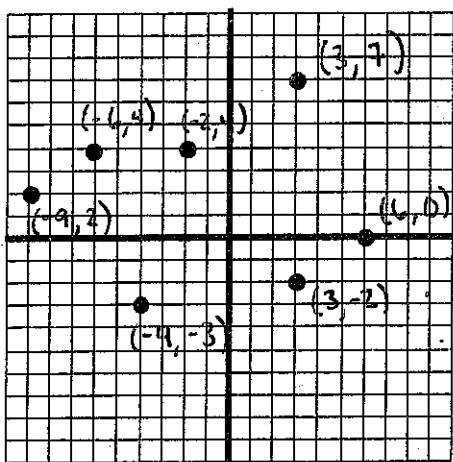


Domain: $\{-3, -2, 0, 2\}$
 Range: $\{-5, 1\}$
 Function? Yes

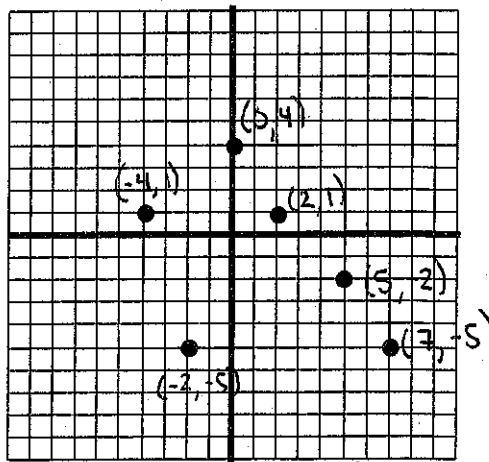


Domain: $\{-7, -5, 9, 11\}$
 Range: $\{-2, 1, 2, 4\}$
 Function? Yes

D. Graphs



Domain: $\{-9, -6, -4, -2, 3, 6\}$
 Range: $\{-3, -2, 0, 2, 4, 7\}$
 Function? No



Domain: $\{-4, -2, 0, 2, 5, 7\}$
 Range: $\{-5, -2, 1, 4\}$
 Function? Yes

E. Equation.

1. $f(x) = 4x - 2$ when $x = \{-2, 4, 8\}$
 Domain: $\{-2, 4, 8\}$
 Range: $\{-10, 14, 30\}$
 Function? Yes

2. $g(x) = 3x^2 - 4x$ when $x = \{-1, 0, 3\}$
 Domain: $\{-1, 0, 3\}$
 Range: $\{7, 0, 15\}$
 Function? Yes