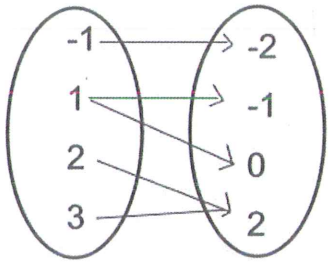
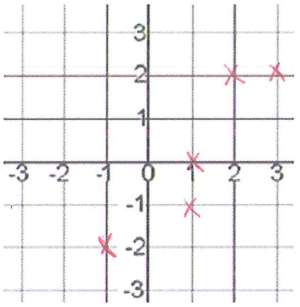
Practice Worksheet: Relations & Functions

Use the given form of each relation to complete the other forms. Then determine if the relation is a function.

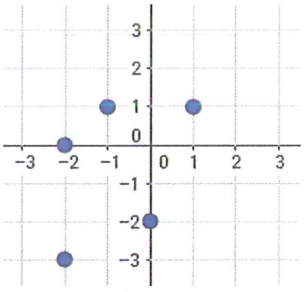
1] Rewrite the relation given in the mapping diagram as a scatterplot.

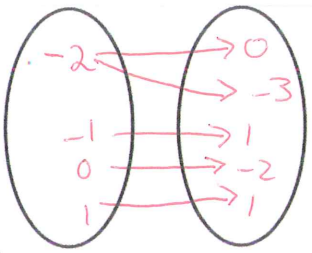




Is the relation also a function? Relation

2] Rewrite the relation given in the scatter plot as a mapping diagram.

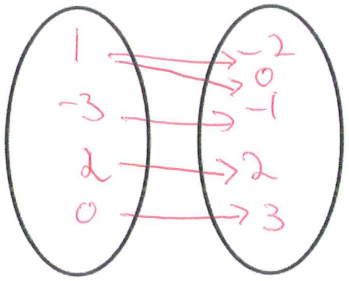




Is the relation also a function? Relation

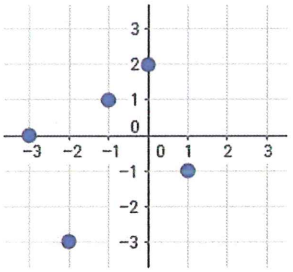
3] Rewrite the relation given in the table as a mapping diagram.

x	y
1	-2
-3	-1
1	0
2	2
0	3



Is the relation also a function? Relation

4] Rewrite the relation given in the scatter plot as a **set** of ordered pairs (NOT a table).

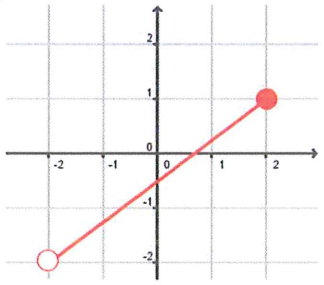


(-3, 0)
(-2, -3)
(-1, 1)
(0, 2)
(1, -1)

Is the relation also a function? Function

Identify the domain and range, then determine if each graph shows a function or a relation only.

5]

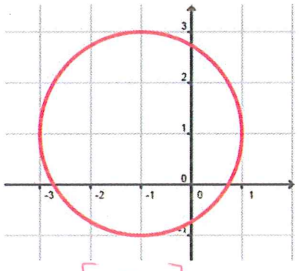


Domain: (-2, 2]

Range: (-2, 1]

Function? Yes

6]

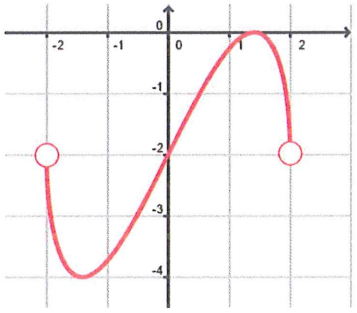


Domain: [-3, 1]

Range: [-1, 3]

Function? No

7]



Domain: (-2, 2)

Range: [-4, 0]

Function? Yes.

Credit: Mrs. Wolfe, Carlisle school, PA
http://carlisleschools.ss13.sharpschool.com/common/pages/UserFile.aspx?fileId=1582601

Identify the domain and range, then evaluate each function for the given value of x.

8] $f = \{(10,7), (-2,4), (5,3), (4,10)\}$

Domain: $\{-2, 4, 5, 10\}$

Range: $\{3, 4, 7, 10\}$

$f(10) =$ 7

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x	y
-3	3
-1	1
0	0
1	1

Domain: $\{-3, -1, 0, 1\}$

Range: $\{0, 1, 3\}$

$f(-1) =$ 1

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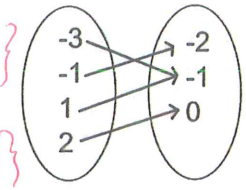

Domain: $\{-3, -1, 1, 2\}$

Range: $\{-2, -1, 0\}$

$f(-3) =$ -1

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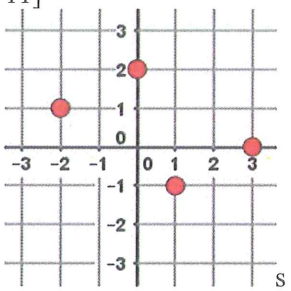

Domain: $\{-2, 0, 1, 3\}$

Range: $\{-1, 0, 1, 2\}$

$f(3) =$ 0

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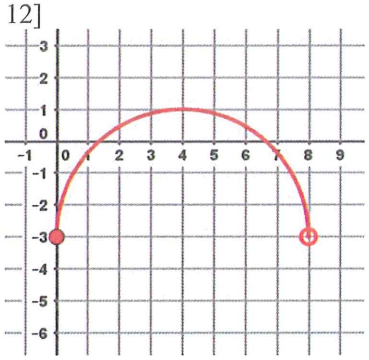

Domain: $[0, 8)$

Range: $[-3, 1]$

$f(0) =$ -3

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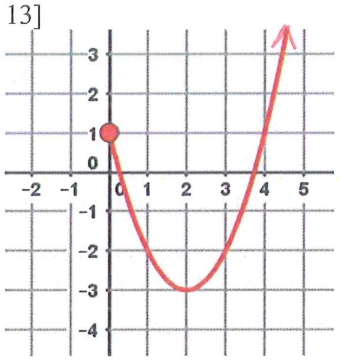

Domain: $[0, \infty)$

Range: $[-3, \infty)$

$f(4) =$ 1

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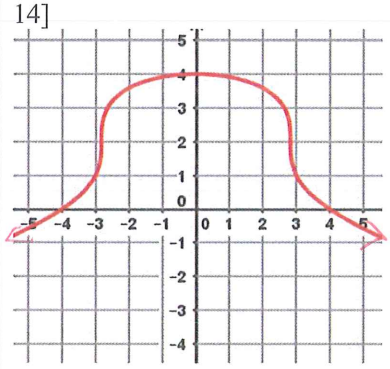

Domain: $(-\infty, \infty)$

Range: $(-\infty, 4]$

$f(-3) =$ 1

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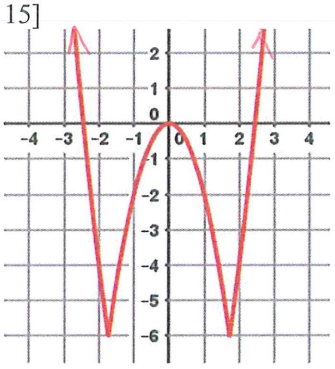

Domain: $(-\infty, \infty)$

Range: $[-6, \infty)$

$f(2) =$ -6

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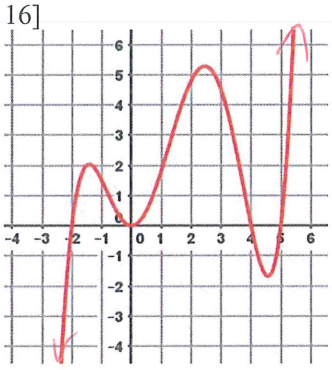

Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

$f(-2) =$ 0