

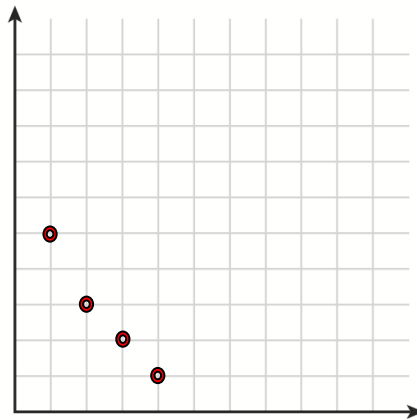
Example 1: Showing Multiple Representations of Relations

Express the relation $\{(1, 5), (2, 3), (3, 2), (4, 1)\}$, as a table, as a graph, and as a mapping diagram

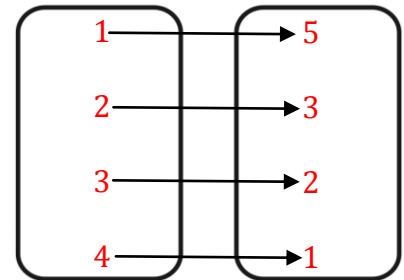
Table

Track Scoring	
Place	Points
1	5
2	3
3	2
4	1

Graph



Mapping Diagram



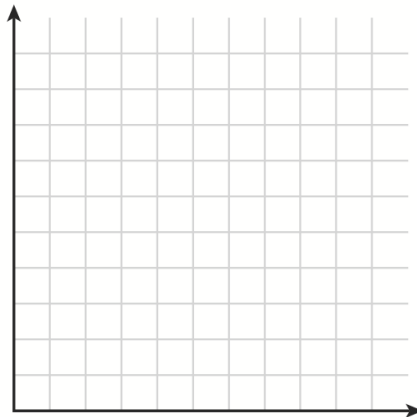
You Try 1!

Express the relation $\{(1, 3), (2, 4), (3, 5)\}$, as a table, as a graph, and as a mapping

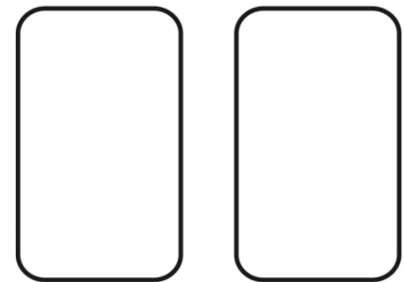
Table

x	y

Graph

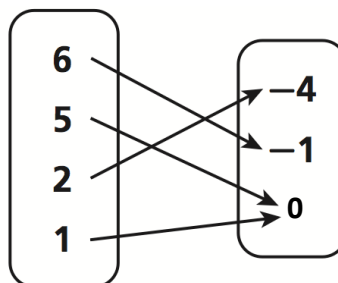
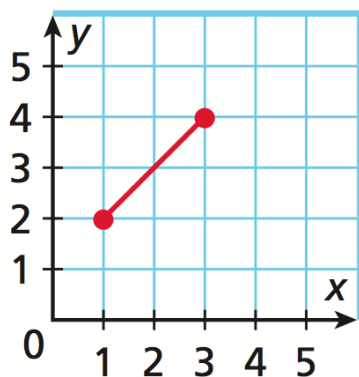


Mapping Diagram



Example 2: Finding the Domain and Range of a Relation

Give the domain and range of each relation.



x	y
1	1
4	4
8	1

Domain: $\{1, 3\}$

Domain: $\{6, 5, 2, 1\}$

Domain: $\{1, 4, 8\}$

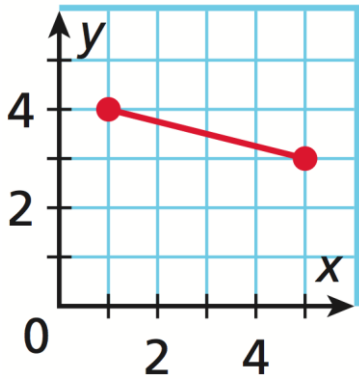
Range: $\{2, 4\}$

Range: $\{-4, -1, 0\}$

Range: $\{1, 4\}$

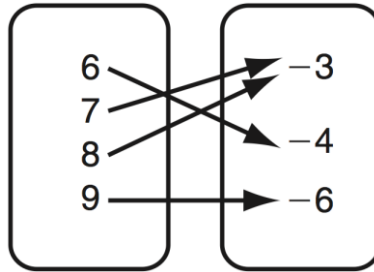
You Try 2!

Give the domain and range of each relation.



Domain: _____

Range: _____



Domain: _____

Range: _____

x	y
-3	8
-2	5
-1	1
-1	4
-1	6

Domain: _____

Range: _____

Example 3: Identifying Functions

Give the domain and range of each relation. Tell whether the relation is a function. Explain.

Field Trip	
Students x	Buses y
75	2
68	2
125	3

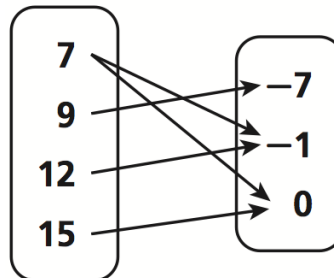
Domain: $\{68, 75, 125\}$

Range: $\{2, 3\}$

Function? **Yes**

Explain: **No Repeated**

Domain (x-value)



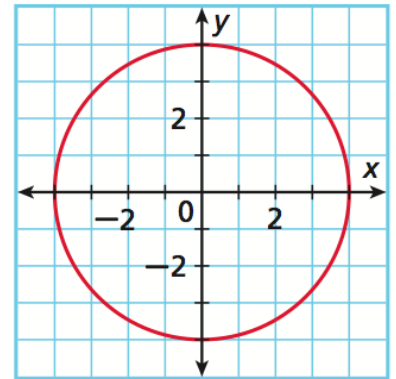
Domain: $\{7, 9, 12, 15\}$

Range: $\{-7, -1, 0\}$

Function? **Yes**

Explain: **No Repeated**

Domain (x-value)



Domain: $[-4, 4]$

Range: $[-4, 4]$

Function? **No**

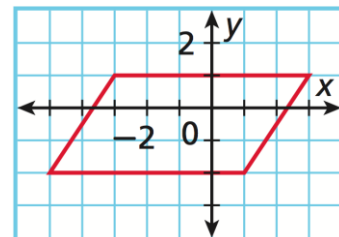
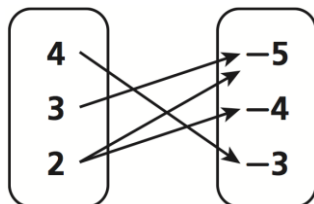
Explain: **Does not pass the**

vertical line test

You Try 3!

Give the domain and range of each relation. Tell whether the relation is a function. Explain.

$\{(8, 2), (-4, 1), (-6, 2), (1, 9)\}$



Domain: _____

Range: _____

Function? _____

Explain: _____

Domain: _____

Range: _____

Function? _____

Explain: _____

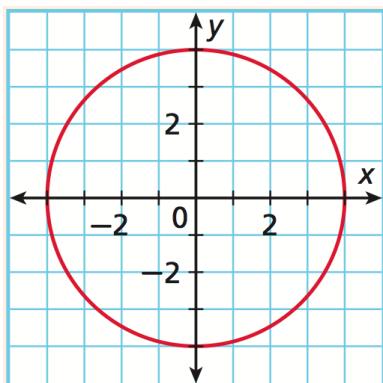
Domain: _____

Range: _____

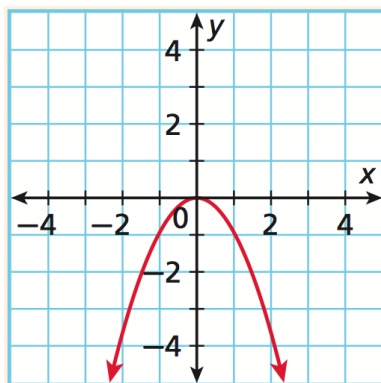
Function? _____

Explain: _____

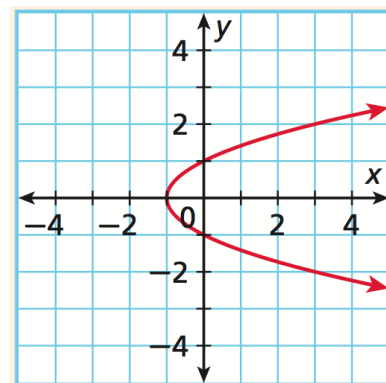
The Vertical Line Test



Function? **No**



Function? **Yes**



Function? **No**

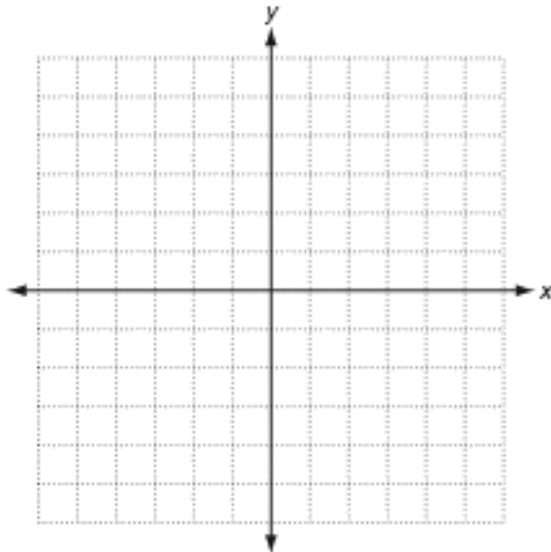
Check your Progress

Express the relation $\{(-2, 5), (-1, 4), (1, 3), (2, 4)\}$ as a table, as a graph, and as a mapping diagram.

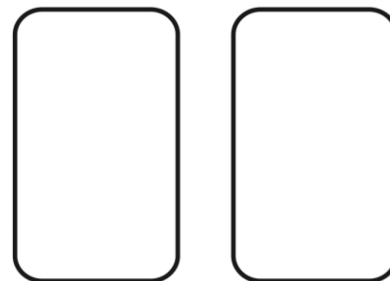
Table

x	y

Graph



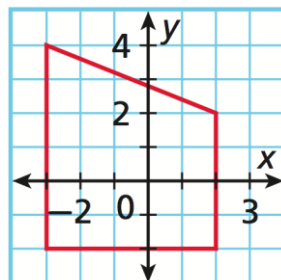
Mapping Diagram



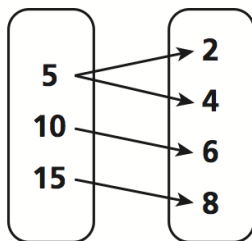
Give the domain and range of the relation.

Domain: _____

Range: _____



Give the domain and range of the relation. Tell whether the relation is a function. Explain.



Domain: _____

Range: _____

Function? _____