

Algebra 1 10/26

Warm Up IXL

Algebra 1

A.8

1-6 Relations

I can represent relations and interpret graphs of relations

Coordinate System/Plane

is formed by the intersection of a horizontal and vertical number line

x-axis

the horizontal number line

y-axis

the vertical number line

Origin

the point of intersection of the x- and y-axis $(0, 0)$

Ordered Pair

is a set of numbers, coordinates, written (x, y)

x-coordinate

the 1st number in an ordered pair tells how far left or right you move along the x-axis

y-coordinate

the 2nd number in an ordered pair tells how far up or down you move along the y-axis

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Relation

a set of ordered pairs

Domain

the set of all x-values of a relation

Range

the set of all y-values of a relation

Mapping Diagram

illustrates how each element of the domain is paired with an element of the range

$\{(2, 4), (-1, 4), (0, 6), (1, 8), (2, 8)\}$



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Ways to represent a relation

Ordered Pairs

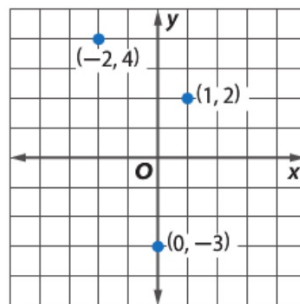
(1, 2)
(-2, 4)
(0, -3)

Table

x	y
1	2
-2	4
0	-3

x	y
1	2
-2	4
0	-3

Graph



Mapping



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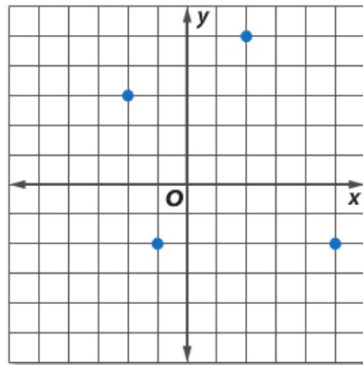
Ex. 1

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

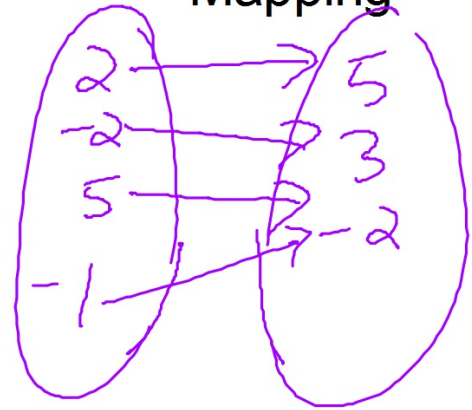
Table

x	y
2	5
-2	3
5	-2
-1	-2

Graph



Mapping



B. Determine the domain and range of the relation

$$D: \{2, -2, 5, -1\}$$

$$R: \{5, 3, -2\}$$

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Independent Variable

the input value/value that determines the output/the domain values

Dependent Variable

the output value/value determined by the input/ the range values

Ex. 2 Identify the independent and dependent variable for each relation

- A. **DANCE** The dance committee is selling tickets to the Fall Ball. The more tickets that they sell, the greater the amount of money they can spend for decorations.

decorations depends on ticket sales

ind = ticket sales depend = decorations

- B. **MOVIES** Generally, the average price of going to the movies has steadily increased over time.

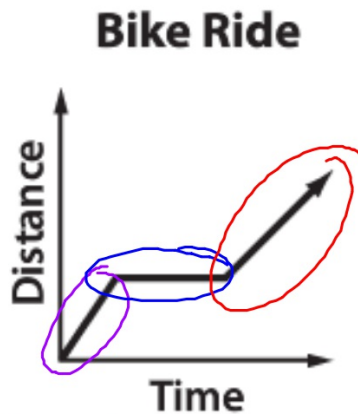
ind: time depend: price

- C. The air pressure inside a tire increases with the temperature.

ind: temp dep: air press.

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Ex. 3 The graph represents the distance Brenden has ridden on his bike. Describe what happens in the graph.



Breden riding fast away from home then stopped, and rode fast to his destination.

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ICA Pg 43

#2-30ev

Hmwk IXL Algebra 1 Q.1-Q.3