Name _____ Class _____ Date _____

Reteaching 4-2

Relations and Functions

OBJECTIVE: Identifying functions

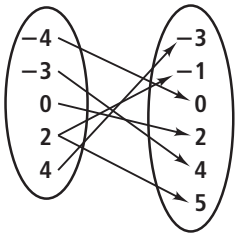
MATERIALS: None

A function is a relation that assigns exactly one value in the range to each value in the domain.

Example

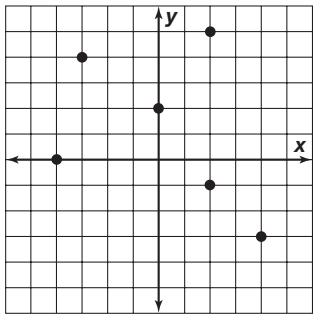
Consider the relation $\{(-3, 4), (2, -1)\ (-4, 0), (0, 2), (4, -3), (2, 5)\}$.

Use a mapping diagram to determine whether the relation is a function.



The relation is not a function because the domain value 2 corresponds to two range values, -1 and 5.

Use the vertical-line test to determine whether the relation is a function.



The relation is not a function because a vertical line passes through $(2, -1)$ and $(2, 5)$.

Exercises

Find the domain and range of each relation.

1. $\{(-4, 3), (-2, -1), (0, 0), (1, 4), (2, 6)\}$

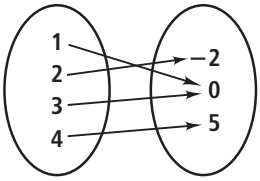
2. $\{(-6, -4), (-3, -1), (1, 2), (2, 4), (3, 7)\}$

Determine whether each relation is a function.

3. $\{(-1, 2), (0, 3), (4, 3), (0, 5)\}$

4. $\{(12, 5), (-6, 15), (15, -8), (-14, 0), (17, 15)\}$

5.



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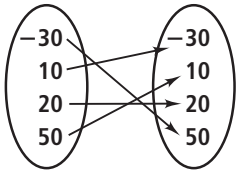

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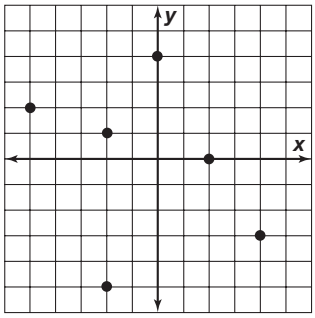

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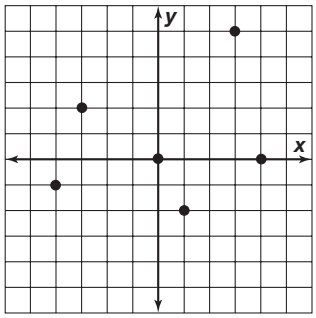

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