Name _____ Date _____

Functions versus Relations (Solutions Included) - Guided Lesson Explanation

Explanation#1

If we check the ordered pairs we can determine if every x value maps to just one y value. (8,- 10), (5,2), (4,7), (3,9), (5,-7)

x-value maps to exactly one y-value.

x=5 maps to both y=7 and y = -7.

The Domain tracks to the x value (8,-10), (5,2), (4,7), (3,9), (5,-7)

D = {3, 4, 5, 8}

Range is the y- value (8,- 10), (5,7), (4,7), (3,9), (5,-7)

R = {-7, 7, 9,-10}

We can that there is a duplicate x (5) and y (7) value.

So, this is not a function, D = {3, 4, 5, 8}, R = {-10, -7, 7, 9}

Explanation#2

If we check the ordered pairs we can determine if every x value maps to just one y value. (-8, -1), (5, -7), (1,3), (10,-0)

The Domain tracks to the x value (-8, -1), (5, -7), (1, -3), (10,-0)

D = {-8, -1, -5, -10}

Range is the y- value (-8, -1), (5, -7), (1, -3), (10,-0)

R = {-0, -1, -3, -7}

All x and y values are unique.

So, this is function, D = (-8, -1, -5, -10), R = (-0, -1, -3, -7)

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Explanation # 3

It is a function. D = $\{x|x \in \mathrm{R}\}$, R = $\{x|x \in \mathrm{R}\}$.