

Relation, Function, Domain & Range

Based on Online Lesson @: mathwarehouse.com/algebra/relation/math-function.php

Part I

1) What is the domain and range of the following relation?

{ (-1,2), (2, 51), (1, 3), (8, 22), (9, 51) }

domain: _____

range: _____

2) What is the domain and range of the following relation?

{ (-5,6), (21, -51), (11, 93), (81, 202), (19, 51) }

domain: _____

range: _____

3) What is the domain and range of the following symbolic relation?

{ (👉, 🐱), (👉, 🐱), (🚗, 🚗), (👉, 🍷), (🚗, 🚗), (🏭, 🏭), (🏭, 🏭) }

domain: _____

range: _____

Part II

1) Which relations below are functions? _____

Relation #1 { (-1,2), (-4,51), (1,2), (8,-51) }

Relation #2 { (13,14), (13,5), (16,7), (18,13) }

Relation #3 { (3,90), (4,54), (6,71), (8, 90) }

2) Which relations below are functions? _____

Why?

Relation #1 { (3,4), (4,5), (6,7), (8,9) }

Relation #2 { (3,4), (4,5), (6,7), (3,9) }

Relation #3 { (-3,4), (4,-5), (0,0), (8,9) }

Relation #4 { (8, 11), (34,5), (6,17), (8,19) }

3) Which relations below are functions? _____

Why?

Relation #1 { (3,4), (4,5), (6,7), (3,-9) }

Relation #2 { (3,4), (4,5), (6,7), (5,4) }

Relation #3 { (0,4), (4,-5), (0,0), (8,9) }

Relation #4 { (8, 11), (34,5), (6,17), (6,19) }

4) For the following relation to be a function, **X** cannot be what values?

{ (8, 11), (34,5), (6,17), (**X**, 22) }

5) For the following relation to be a function, **X** cannot be what values?
{ (12, 13), (-11, 22), (33, 101), (**X**, 22) }

6) For the following relation to be a function, **X** can not be what values?
{ (12,14), (13,5) , (-2,7), (**X**,13) }

7) For the following relation to be a function, **X** can not be what values?
{ (13,14), (12,5) , (16,7), (**X**,13) }

Alex states that the relation below is not a function. Lillian says that it is a function. Who is correct? Explain your reasoning.

Relation { (13,14), (12,5) , (16,7), (13, 14), (-2, 33), (13, 14) }

Explanation:

Answers to Questions and an accompanying online lesson available @: Based on Online Lesson @: www.mathwarehouse.com/algebra/relation/math-function.php

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Group Activity

Group Members:

Introduction to Functions Activity

Activity

Task #1) Write a **relation that is not a function** with at least **6** ordered pairs:

Task #2) Write a **function** with at least **6** ordered pairs:

Task #3) Now on separate, blank sheet of paper, copy down both of the relations, and ask another person in your group to

- 1) Identify which relation is the function
- 2) Explain why the other relation is **not** a function.

Task #4) Compare your answers.

Task #5) After you have both agreed upon an answer, explain what prevented the one relation from being a function.

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