LESSON MAKER PRO

Function Value Hunt

Find the input and output values in each function.

GRADE 8 · 8.PFA.2.b

8.PFA.2.b "Identify the domain and range of a function represented as a set of ordered pairs, a table, or a graph of discrete points."

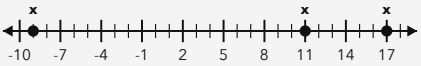
NAME _____ DATE _____

INPUTS AND OUTPUTS

The domain is the set of all input values, or x-values, in a function. The range is the set of all output values, or y-values, and each value is listed only once.

WORKED EXAMPLE

The function is {(-9, 13), (11, -12), (17, 13)}. Use the ordered pairs and the number line to identify the domain and range.



1. The domain contains the first number in each ordered pair.
2. Domain = {-9, 11, 17}.
3. The range contains the second number in each ordered pair.
4. Range = {-12, 13}, because 13 is listed once.

Answer: Domain = {-9, 11, 17}; Range = {-12, 13}

PRACTICE 6 problems

1 Identify the domain and range of {(3, -1), (-3, 4), (0, 4)}.

ANSWER _____

2 A function is shown in the table. x: -6, -1, 4 y: 2, 2, 8 Identify the domain and range.

ANSWER _____

3 Identify the domain and range of {(2, 6), (8, -3), (9, 6)}.

ANSWER _____

4 A function is shown in the table. x: 3, 4, 6 y: -6, 0, 3 Identify the domain and range.

ANSWER _____

5 Identify the domain and range of {(10, 3), (12, 6), (14, 3)}.

ANSWER _____

6 A function is shown in the table. x: -8, -6, 2, 9 y: 10, -5, 0, 10 Identify the domain and range.

ANSWER _____

APPLY IT Show your work

1 The table shows how many videos a student edited during each week of a media club project. Identify the domain and range.

MEDIA CLUB EDITING LOG

Week	Videos Edited
1	4
2	7
3	7
4	9

ANSWER _____

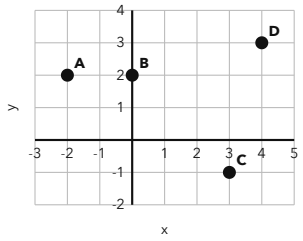
2 A gaming app recorded a player's practice time and score as (minutes practiced, points earned): {(15, 6), (30, 10), (45, 14), (60, 18)}. Identify the domain and range.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The graph shows discrete points for a function. A student says the range is {-2, 0, 3, 4} because those values appear along the horizontal axis. Identify the domain and range, then explain how you can tell them apart.



WORK SPACE AND ANSWER

ANSWER KEY

Function Value Hunt

GRADE 8 · 8.PFA.2.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Identify the domain and range of {(3, -1), (-3, 4), (0, 4)}.	**Domain = {-3, 0, 3}; Range = {-1, 4}**
2	A function is shown in the table. x: -6, -1, 4 y: 2, 2, 8 Identify the domain and range.	**Domain = {-6, -1, 4}; Range = {2, 8}**
3	Identify the domain and range of {(2, 6), (8, -3), (9, 6)}.	**Domain = {2, 8, 9}; Range = {-3, 6}**
4	A function is shown in the table. x: 3, 4, 6 y: -6, 0, 3 Identify the domain and range.	**Domain = {3, 4, 6}; Range = {-6, 0, 3}**
5	Identify the domain and range of {(10, 3), (12, 6), (14, 3)}.	**Domain = {10, 12, 14}; Range = {3, 6}**
6	A function is shown in the table. x: -8, -6, 2, 9 y: 10, -5, 0, 10 Identify the domain and range.	**Domain = {-8, -6, 2, 9}; Range = {-5, 0, 10}**

PART 2 · APPLY IT

1. **Domain = {1, 2, 3, 4}; Range = {4, 7, 9}** Use the Week column for the domain and the Videos Edited column for the range. List the repeated output 7 only once.
2. **Domain = {15, 30, 45, 60}; Range = {6, 10, 14, 18}** The first number in each pair is minutes practiced, so those values form the domain. The second number in each pair is points earned, so those values form the range.

CHALLENGE

Domain = {-2, 0, 3, 4}; Range = {-1, 2, 3}. The domain is made from the horizontal x-coordinates, and the range is made from the vertical y-coordinates. The repeated y-value 2 is listed once.

Accept domain and range values in any order when they are clearly identified as sets. Do not accept repeated values in a range or domain.