5.5 Graphs and Relations and Functions

Lesson 7

Jan 30-4:12 PM

Practice **EXAMPLE 3**

Determine Domain and Range of the Graph of a Situation

n: dependent variable, t: independent variable

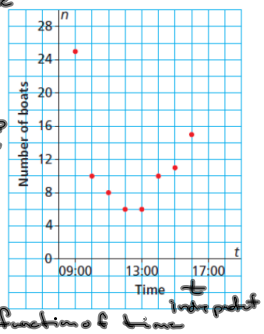
a) Identify the dependent variable and the independent variable. # of Boats depends on time of day.

b) Why are the points on the graph not connected? Discrete Data — you need whole numbers.

c) Determine the domain and range of the graph.

D { 9, 10, 11, 12, 13, 14, 15, 16 }

R { 6, 8, 10, 11, 15, 25 }



t = independent = function of time

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Practice **YOU TRY!**

Determine Domain and Range of the Graph of a Situation

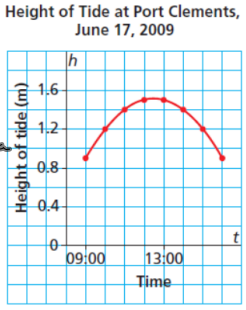
a) Identify the dependent variable and the independent variable. h - Dependent, t -> Independent

b) Why are the points on the graph connected? Continuous Data — time can be in minutes or sec, height in decimals.

c) Determine the domain and range of the graph.

D { 9 ≤ t ≤ 16 }

R { 0.9 ≤ h ≤ 1.5 }



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Practice **EXAMPLE 4**

Determining the Domain and Range Values from the Graph of a Function

Here is a graph of the function f(x) = -3x + 7

a) Determine the range value when the domain value is -2.

f(-2) = 13

b) Determine the domain value when the range value is 4.

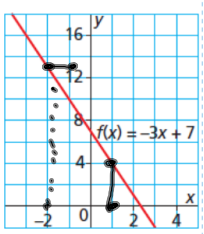
f(x) = 4

f(1) = 4

Range value is 4

Domain value is 1

(1, 4)



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a) Domain value is -2 ∴ f(-2)
start at x = -2 and find where it intersects the y.
So when Domain value is -2
the Range value is 13
ordered Pair is (-2, 13)

b) Determine the value of x when f(x) = 4
Since f(x) = y , begin at y = 4

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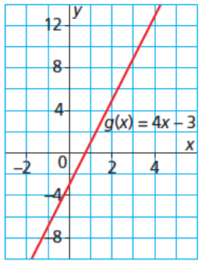
Practice YOU TRY!

Determining the Domain and Range Values from the Graph of a Function

Here is a graph of the function g(x) = 4x - 3



a) Determine the range value when the domain value is 3.
When Domain value is 3
Range value is 9
∴ g(3) = 9

b) Determine the domain value when the range value is -7. g(x) = -7
Determine value of x when y = -7
g(-1) = 7 (x = -1)

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Practice HOMEWORK!

Textbook Questions:

Page 295 # 11, 12, 13

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