

Algebra 1 - Functions and Function Notation - Test

Common Core F-IF.A.1, F-IF.A.2, F-IF.B.5 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

Take this 20-point, 45-minute test to measure your skill with functions and function notation (F-IF.A.1, F-IF.A.2, and F-IF.B.5). Read each question carefully, show your work, and check units and signs before you move on. If you get stuck, skip the question and return to it at the end.

About this test

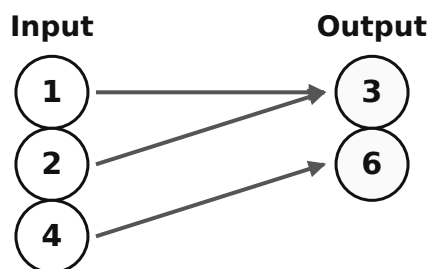
- Grade: Algebra 1
- Chapter: Functions and Function Notation
- Standards: F-IF.A.1, F-IF.A.2, F-IF.B.5
- Time: 45 minutes
- Total: 20 points

Question 1 - Function or not [2 pts]

Decide whether each relation is a function. Explain.

- a. $\{(0,3),(1,5),(2,7),(3,9)\}$ (1 point)
b. $\{(2,1),(2,4),(5,6)\}$ (1 point)

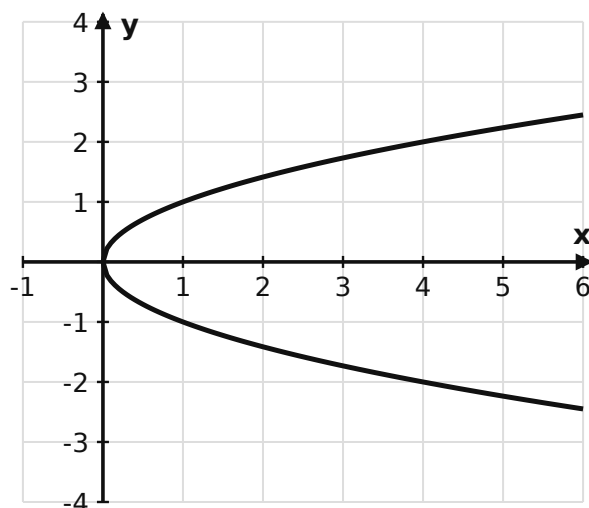
Question 2 - Mapping diagram [2 pts]



Mapping for question 2.

Is the mapping a function? Give the domain and range.

Question 3 - Vertical line test [2 pts]



Graph for question 3.

Does the graph represent a function? Use the vertical line test to explain.

Question 4 - Evaluate a function [2 pts]

Let $f(x) = 2x^2 - 3x + 1$. Find the values.

- a. $f(-2)$ (1 point)
- b. $f(3)$ (1 point)

Question 5 - Input and output [2 pts]

Let $f(x) = 4x - 5$.

- a. Find $f(6)$. (1 point)
- b. Find x when $f(x) = 11$. (1 point)

Question 6 - Domain and range [2 pts]

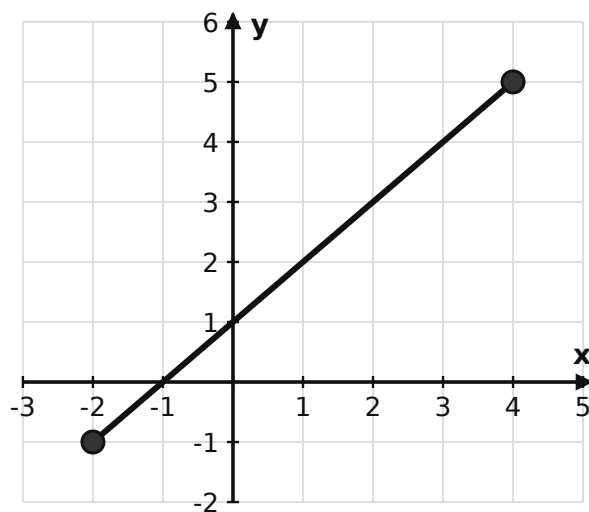
Give the domain and range of $\{(,2),(0,5),(1,2),(4,-3)3\}$.

Question 7 - Phone plan function [3 pts]

Priya pays a \$15 setup fee plus \$20 each month. Her total cost is $P(m) = 20m + 15$ dollars after m months.

- Find $P(6)$. (1 point)
- Find the number of months for which $P(m) = 215$. (1 point)
- Describe a reasonable domain. (1 point)

Question 8 - Graph of a segment [3 pts]



Graph for question 8.

The graph shows a function.

- Give the domain. (1 point)
- Give the range. (1 point)
- Find the output for the input 1. (1 point)

Question 9 - Rule from a table [2 pts]

x	f(x)
1	3
2	5
3	7
4	9
5	11

Table for question 9.

The table shows a linear function f . Write a rule for $f(x)$ and use it to find $f(10)$.