

Grade 8 - Understanding Functions - Test

Common Core 8.F.A.1, 8.F.A.2, 8.F.A.3 · maths-pdf.fr/en/

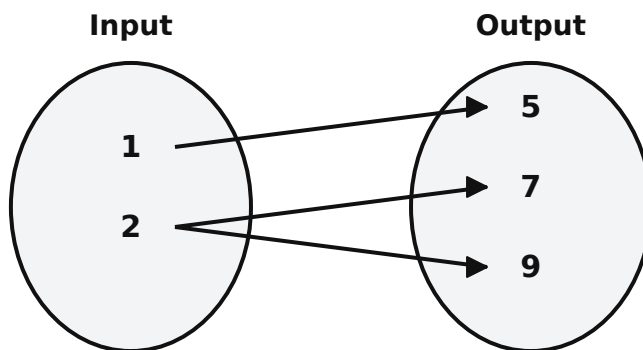
Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks functions, function notation, linear and nonlinear functions and comparing functions (Common Core 8.F.A.1, 8.F.A.2 and 8.F.A.3). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

- Grade: Grade 8
- Chapter: Understanding Functions
- Standards: 8.F.A.1, 8.F.A.2, 8.F.A.3
- Time: 45 minutes
- Total: 20 points

Question 1 - Function or not [3 pts]



Relation 1.

Does the mapping diagram show a function? Explain. Then change one arrow so that it does.

Question 2 - Evaluate [2 pts]

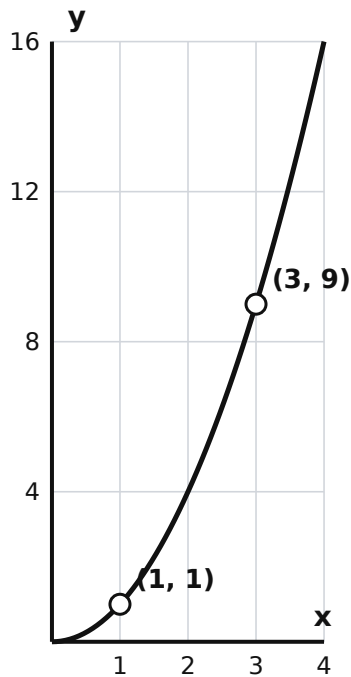
- Find $f(5)$ if $f(x) = 4x - 7$. (1 point)
- Find $g(-3)$ if $g(x) = x^2 - 4$. (1 point)

Question 3 - Write a rule [3 pts]

x	0	1	2	3
y	4	7	10	13

Write a rule for the table and find y when $x = 10$.

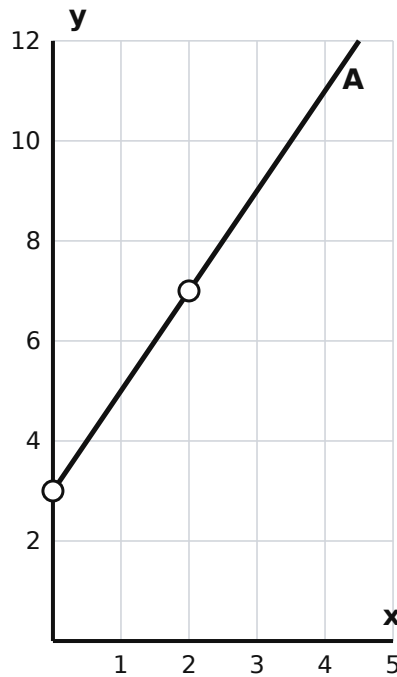
Question 4 - Linear or nonlinear [3 pts]



A graph.

Is the graphed function linear? Give two reasons.

Question 5 - Compare [3 pts]



Function A.

Function A is graphed. Function B is $y = 5x - 1$. Which has the greater rate of change? Which has the greater initial value?

Question 6 - Function in context [2 pts]

A skating rink charges \\$5 for skate rental plus \\$3 per hour. Write a function for the cost c after h hours and find the cost for 4 hours.

Question 7 - Domain and range [2 pts]

A function has the ordered pairs (0, 4), (1, 6), (2, 8). Write its inputs and outputs, then write its rule.

Question 8 - Explain [2 pts]

Mei says $y = 3$ is not a function because every input gives the same output. Is she right?