

Algebra 1 - Functions and Function Notation - Quiz

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

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

This quick quiz has 10 questions about functions and function notation, matching Common Core F-IF.A.1, F-IF.A.2, and F-IF.B.5. Choose the best answer, then use the explanation to learn from every miss. The wrong choices come from common mistakes, so read them with care before you decide.

Algebra 1 · Common Core State Standards: **F-IF.A.1, F-IF.A.2, F-IF.B.5**

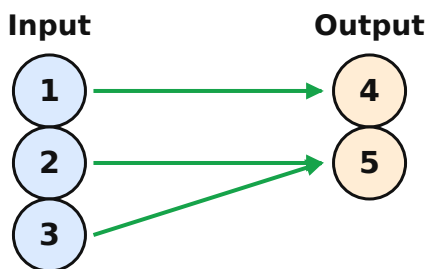
Questions

Question 1

Which relation is a function?

- A. $\{(1,2),(1,3),(2,4)\}$
- B. $\{(1,2),(2,3),(3,4)\}$
- C. $\{(0,5),(0,6),(1,7)\}$
- D. $\{(2,1),(2,2),(2,3)\}$

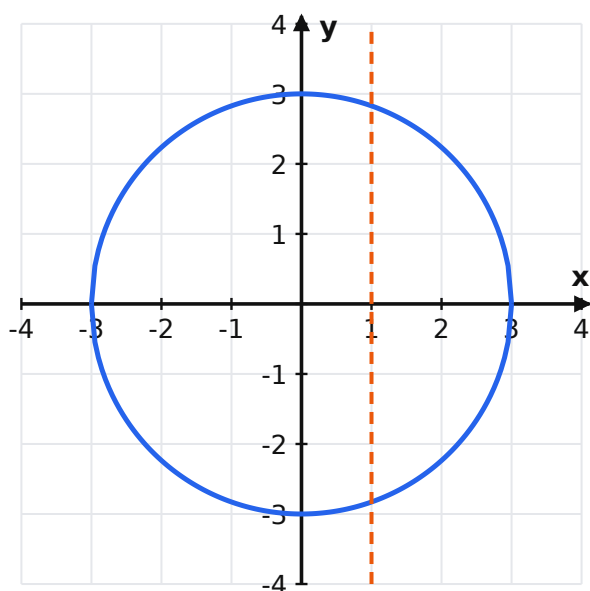
Question 2



Is the mapping a function?

- A. No, because the output 5 appears twice
- B. No, because the output 4 has no arrow from 2
- C. Yes, each input has exactly one output
- D. Only if the outputs are in order

Question 3



Is the circle the graph of a function?

- A. Yes, it is a closed curve
- B. Yes, every point has one x-value
- C. No, a vertical line crosses it twice
- D. No, because it has no y-intercept

Question 4

For $f(x) = 3x - 4$, what is $f(-2)$?

- A. -10
- B. 10
- C. -2
- D. 2

Question 5

For $f(x) = x^2 - 5$, what is $f(-3)$?

- A. -14
- B. -4
- C. 1
- D. 4

Question 6

For $f(x) = 2x + 3$, for which x does $f(x) = 17$?

- A. $x = 20$

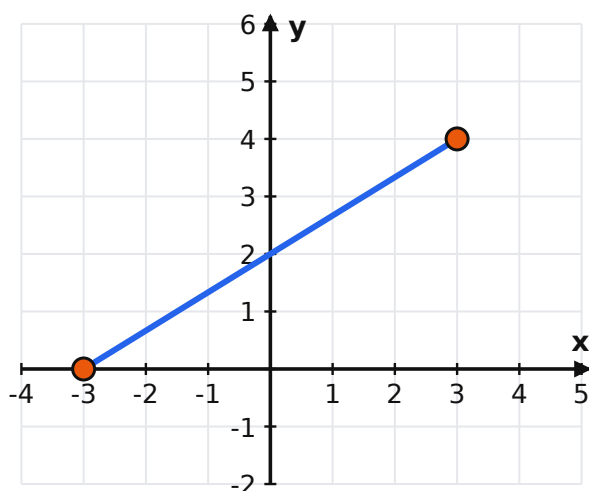
- B. $x=7$
- C. $x=37$
- D. $x=10$

Question 7

What is the domain of $\{(-3,1),(0,4),(2,1),(5,0)\}$?

- A. $\{-3,0,2,5\}$
- B. $\{0,1,4\}$
- C. $\{-3,0,2,5,1,4\}$
- D. $\{-3,2,5\}$

Question 8



What is the range of the function shown?

- A. $-3 \leq y \leq 3$
- B. $0 \leq y \leq 4$
- C. $-3 \leq y \leq 4$
- D. $0 \leq y \leq 3$

Question 9

A function is $C(n) = 4n + 6$. What is $C(7)$?

- A. 28
- B. 70
- C. 17
- D. 34

Question 10

Which situation describes a function of the input?

- A. Input: a package's weight; output: its shipping cost from a fixed rate chart
- B. Input: a city; output: a street in that city
- C. Input: a month; output: a day in that month
- D. Input: a parent; output: a child of that parent

Answers

1. **B** – A function cannot repeat an input with different outputs. Only the first relation has all different inputs.
2. **C** – A function only requires one output per input. Two inputs can share an output.
3. **C** – At most x-values, a vertical line meets the circle in two points, so an input has two outputs.
4. **A** – Substitute: $3(-2) - 4 = -6 - 4 = -10$. Treating the minus as a plus gives 2.
5. **D** – $(-3)^2 = 9$, then $9 - 5 = 4$. Computing -3^2 as -9 gives -14 .
6. **B** – Solve $2x + 3 = 17$: $2x = 14$, so $x = 7$. Substituting 17 for x gives 37, which is $f(17)$.
7. **A** – The domain is the set of inputs, the first numbers in each pair. The second numbers are the range.
8. **B** – The range is the set of y-values: from 0 up to 4.
9. **D** – $4(7) + 6 = 28 + 6 = 34$. Forgetting the 6 gives 28.
10. **A** – A function has one output per input. A city has many streets, a month has many days, and a parent may have several children.

Remember

- A function assigns exactly one output to each input.
- The domain is the set of inputs; the range is the set of outputs.
- The vertical line test: a graph is a function if no vertical line meets it twice.
- $f(x)$ is read “f of x” and means the output when the input is x.
- In context, the domain is limited to the inputs that make sense.