



Functions: Real World Practice

Name: _____

Grade: 8 _____

Date: _____

Practice function basics, tables, graphs, reasoning, and real-world scenarios. Try the interactive mini-quizzes for instant feedback!

Quick Check

Function notation is written as ...?

What do you call the result of a function?

Which shows values for x and $f(x)$?

Part 1 · Function Basics BASICS

1. Write a function $f(x)$ for "double a number".

2. What is $f(7)$ if $f(x) = x + 5$?

3. If $f(x) = 3x$, what is $f(4)$?

4. What is the output of $f(x) = x - 2$ for $x = 9$?

5. If $f(x) = 2x + 1$, find $f(0)$, $f(2)$, $f(5)$.

6. What is the input if $f(x) = x/2$ and output is 8?

Part 2 · Tables & Graphs

TABLES

7. Fill table for $f(x) = x + 3$ for $x = 0, 1, 2, 3$.

8. Fill table for $f(x) = 2x$ for $x = 1, 2, 3, 4$.

9. Graph $f(x) = x - 2$ for $x = 0, 1, 2, 3$.

10. Graph $f(x) = 3x$ for $x = 0, 2, 4$.

11. What is the pattern in the outputs for $f(x) = x + 5$?

12. If $f(x) = 2x$, what is the output for $x = 10$?

Part 3 · Challenge & Reasoning

CHALLENGE

13. If $f(x) = 4x - 7$, what input gives output 9?

14. If $f(x) = x/3$, what is $f(12)$?

15. If $f(x) = 2x + 1$, what is $f(6)$?

16. If $f(x) = 5x$, what input gives output 35?

17. If $f(x) = x - 4$, what is $f(10)$?

18. If $f(x) = 3x + 2$, what is $f(5)$?

Part 4 · Real World Practice

REAL WORLD

19. Earning Money

You earn \$9 per hour at a summer job. Write a function $f(x)$ for your earnings after x hours. How much do you earn after 7 hours?

20. School Fundraiser

Your class sells water bottles for \$5 each. Write a function $f(x)$ for money raised after selling x bottles. How many bottles to raise \$80?

21. Pizza Party

Each pizza has 8 slices. Write a function $f(x)$ for total slices in x pizzas. How many slices in 4 pizzas?

Answer Key

1. $f(x) = 2x$
2. 12
3. 12
4. 7
5. $f(0)=1$, $f(2)=5$, $f(5)=11$
6. 16
7. 3, 4, 5, 6
8. 2, 4, 6, 8
9. -2, -1, 0, 1
10. 0, 6, 12
11. +5 each time
12. 20
13. 4
14. 5
15. 13
16. 7
17. 6
18. 17
19. \$63 ($f(x)=9x$, $x=7$)
20. 16 bottles ($f(x)=5x$, $5x=80$)
21. 32 slices ($f(x)=8x$, $x=4$)

Each question uses a function from a real-life scenario. Encourage students to write the function before solving.