

Practice B

For use with pages 46–52

Complete the sentence.

1. A ? is a relationship between two quantities, called the input and output.
2. The collection of all ? values is called the domain of the function. The collection of all ? values is called the range of the function.
3. In a function, there is exactly one ? for each ?.
4. An ? is a table that lists the outputs for several different inputs.

Does the table represent a function? Explain.

5.

Input	Output
2	10
4	12
6	10
8	12

6.

Input	Output
9	0
8	0
7	0
6	0

7.

Input	Output
1	1
2	2
2	3
3	4

Make an input-output table for the function. Use 0, 1, 2, and 3 as the domain.

- | | | |
|------------------|----------------------------|-------------------|
| 8. $y = 2x + 5$ | 9. $y = 4x$ | 10. $y = 15 - x$ |
| 11. $y = x + 18$ | 12. $y = 2x + \frac{1}{2}$ | 13. $y = 20 - 3x$ |

Make an input-output table for the function. Use 2, 2.5, 4, 5, and 5.5 as the domain.

- | | | |
|--------------------|----------------------------|---------------------|
| 14. $y = 3x + 1.5$ | 15. $y = \frac{22}{x} + 7$ | 16. $y = x^2 - 2.5$ |
|--------------------|----------------------------|---------------------|

Aerobics Class In Exercises 17–20, use the following information.

You join an aerobics class at the local gym. The cost is \$3 per class plus \$10 for the initial membership fee.

17. Write an equation that shows the relationship between the number of classes n you attend and the amount you pay p .
18. Evaluate the equation for $n = 1, 2, 5, 8,$ and 10 . Organize your results in an input-output table.
19. Draw a line graph to represent the data in the input-output table.
20. Describe the domain and range of the function whose values are shown in the table.

Monarch Butterflies In Exercises 21–23, use the following information.

When the monarch butterfly is migrating to the south, it has an average speed of 80 miles per day.

21. Write an equation that shows the relationship between the number of days t and the distance (in miles) it has traveled d .
22. Evaluate the equation for $t = 2, 5, 8,$ and 10 . Organize your results in an input-output table.
23. Draw a line graph to represent the data in the input-output table.