

1.6 EXERCISES

HOMEWORK KEY

- = **WORKED-OUT SOLUTIONS**
for Exs. 7, 8, 11, 17, and 43
- ✚ = **TAKS PRACTICE AND REASONING**
Exs. 11, 12, 13, 26, 27, 30, and 31
- ◆ = **MULTIPLE REPRESENTATIONS**
Exs. 23, 24, 18, and 38

SKILLS AND REASONING

- VOCABULARY** Copy and complete: A(n) ? is a number in the domain of a function. A(n) ? is a number in the range of a function.
- WRITING** In the equation $b = a - 2$, which variable is the independent variable and which is the dependent variable? *Explain.*

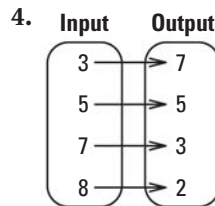
EXAMPLES 1 and 2

on pp. 35–36
for Exs. 3–11

DOMAIN AND RANGE Identify the domain and range of the function.

3.

Input	Output
0	5
1	7
2	15
3	44



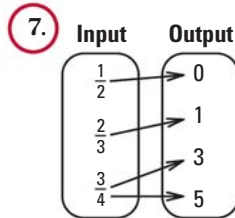
5.

Input	Output
6	5
12	7
21	10
42	17

IDENTIFYING FUNCTIONS Tell whether the pairing is a function.

6.

Input	Output
0	7.5
1	9.5
2	11.5
3	13.5



8.

Input	Output
7	13
11	8
21	13
35	20

ERROR ANALYSIS In Exercises 9 and 10, describe and correct the error(s) related to the function represented by the table.

Input, x	1	2	3	4	5
Output, y	6	7	8	6	9

9. The pairing is not a function. One output is paired with two inputs. ✗

10. The pairing is a function. The range is 1, 2, 3, 4, and 5. ✗

- TAKS REASONING** Draw a mapping diagram for a function with 6 inputs. Then make a table to represent the function.
- TAKS REASONING** The domain of the function $y = 5x - 1$ is 1, 3, 4, 5, and 6. Which number is in the range of the function?
 - (A) 0
 - (B) 4
 - (C) 9
 - (D) 15
- TAKS REASONING** Each output of a function is 0.5 less than the corresponding input. Which equation is a rule for the function?
 - (A) $y = x - 0.5$
 - (B) $y = x + 0.5$
 - (C) $y = 0.5 - x$
 - (D) $y = 0.5x$

EXAMPLES 3 and 4

on pp. 36–37
for Exs. 12–21