

# Function Rules

## Guided Practice



1. Describe the relationship between the terms in the sequence 13, 26, 52, 104, ... Then write the next three terms in the sequence. (Examples 1 and 2)

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2. Use words and symbols to describe the value of each term as a function of its position. Then find the value of the fifteenth term in the sequence. (Example 3)

Position	1	2	3	4	$n$
Value of Term	2	4	6	8	■

3. The table at the right shows the fee for overdue books at a library, based on the number of weeks the book is overdue. Write a function rule to find the fee for a book that is  $x$  weeks overdue. (Example 4)

Weeks Overdue ( $x$ )	Fee (\$)
1	3
2	5
3	7
4	9
$x$	■

## Independent Practice

Use words and symbols to describe the value of each term as a function of its position. Then find the value of the twelfth term in the sequence. (Examples 1–3)



Position	3	4	5	6	$n$
Value of Term	12	13	14	15	■

2.

Position	2	3	4	5	$n$
Value of Term	24	36	48	60	■

3. Describe the relationship between the terms in the sequence 6, 18, 54, 162, ... Then write the next three terms in the sequence. (Example 2)

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4. The table shows the amount it costs to rock climb at an indoor rock climbing facility, based on the number of hours. What is the rule to find the amount charged to rock climb for  $x$  hours? (Example 4)

Time ( $x$ )	Amount (\$)
1	13
2	21
3	29
4	37
$x$	■

**6.ESS Identify Structure** Determine how the next term in each sequence can be found. Then find the next two terms in the sequence.

5. 4, 16, 28, 40, ...

6. 1.5, 3.9, 6.3, 8.7, ...

7.  $2\frac{1}{4}$ ,  $2\frac{3}{4}$ ,  $3\frac{1}{4}$ ,  $3\frac{3}{4}$ , ...

Show your work.

Find the missing number in each sequence.

8. 30, \_\_\_\_\_, 19,  $13\frac{1}{2}$ , ...

9. 43.8, 36.7, \_\_\_\_\_, 22.5, ...

20. The table shows the cost of a pizza based on the number of toppings. Write a function rule to find the cost for a pizza with  $x$  toppings.

Number of Toppings ( $x$ )	Cost (\$)
1	12
2	14
3	16
4	18

**6.ESS Identify Structure** Determine how the next term in each sequence can be found. Then find the next two terms in the sequence.

21. 1, 4, 7, 10, ...

22. 2.3, 3.2, 4.1, 5.0, ...

23.  $1\frac{1}{2}$ , 3,  $4\frac{1}{2}$ , 6, ...

Find the missing number in each sequence.

24. 7, \_\_\_\_\_, 16,  $20\frac{1}{2}$ , ...

25. 14.6, \_\_\_\_\_, 24, 28.7, ...