

1. Input: Cost of 1 adult admission ticket;
Output: Total cost of 4 adult admission tickets
2. Input: Radius; Output: Volume of sphere
3. Many-to-one; It is a function because each input has 1 output.
4. It is not a function because there is one vertical line that intersects the graph at two points.
5. Linear; increasing
6. Nonlinear; decreasing
7. a) $y = 15,000 - 2,000x$
b) The least possible input value is 0 and the corresponding output value is 15,000. It represents the original cost of the car.
c) Decreasing; Linear; The value of the car decreases constantly by \$2,000 each year.

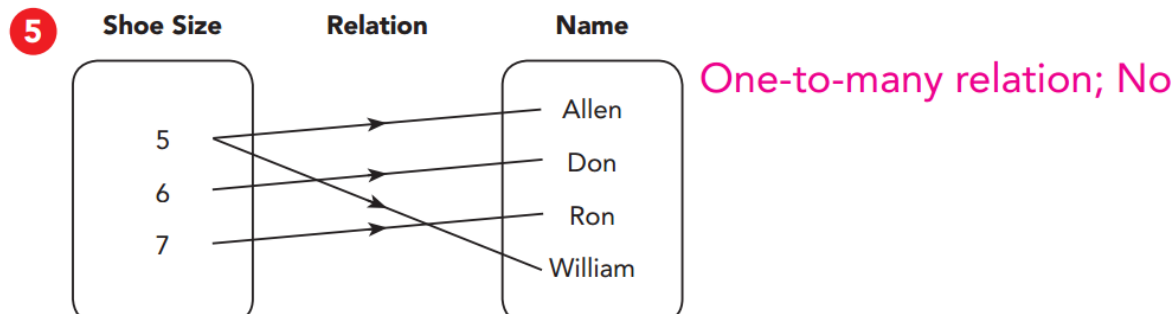
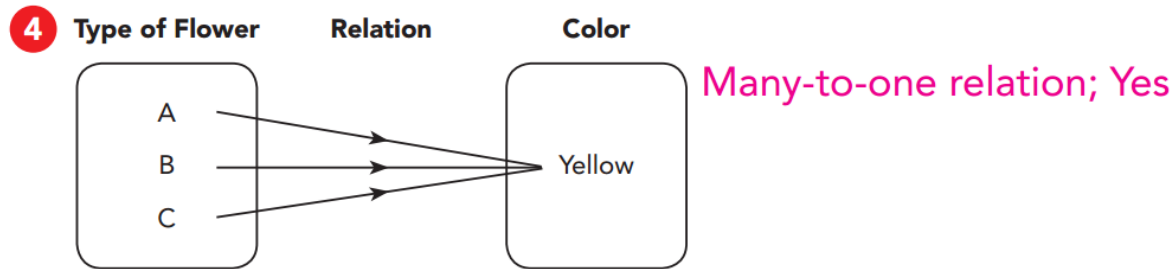
Chapter Review/Test

Concepts and Skills

Given the relation described, identify the input and the output.

- 1 Daphne wants to find the area of a circle given its radius.
Input: Radius; Output: Area of circle
- 2 Mr. Reynard wants to find the total cost of the number of items he bought at a store where everything costs one dollar. Input: Number of items Mr. Reynard bought;
Output: Total cost of the items he bought
- 3 The head of the English department wants to see how each student in Grade 8 does on an English test.
Input: Each student's name; Output: Grades for the English test

Based on the mapping diagrams, state the type of relation. Tell whether each relation is a function.



Tell whether each relation is a function.

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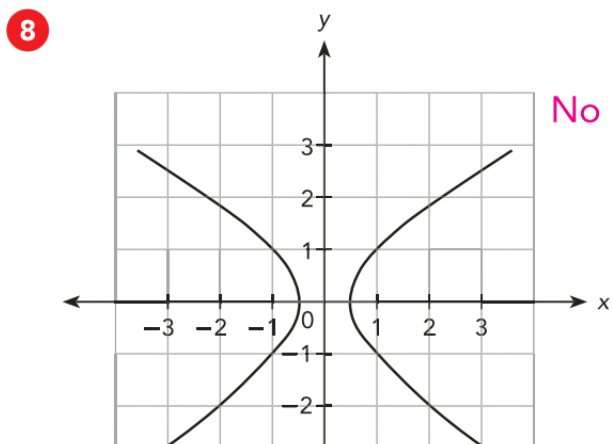
Side Length (cm)	4	5	8	9
Perimeter (cm)	16	20	32	36

Yes

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Month	Jan	Feb	May	Jul	Sep	Oct	Nov	Dec
Number of Public Holidays	2	1	1	1	1	1	2	1

Yes



Tell whether each function is linear or nonlinear. Then tell whether the function is increasing or decreasing.

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Input, x	2	3	5	6
Output, y	1,500	600	150	60

Nonlinear and decreasing function