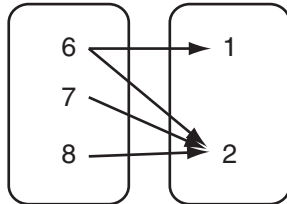


LESSON
4-2 **Problem Solving**
Relations and Functions

Give the domain and range of each relation and tell whether it is a function.

1. The mapping diagram shows the ages x and grade level y of four children. 2.



Age x	Shoe Size y
6	8
9	10
12	10
15	10.5
18	11

3. The list represents the number of cars sold and the bonus received by the salespeople of a car dealership.
 $\{(1, 50), (2, 50), (3, 100), (4, 150)\}$
4. A 2-inch-tall plant grows at a rate of 2.5 inches every week for 5 weeks. Let x represent the number of weeks and y represent the height of the plant.

Use the graph below to answer questions 5–6. A conservation group has been working to increase the population of a herd of Asian elephants. The graph shows the results of their efforts. Select the correct answer.

5. Which relation represents the information in the graph?
- A** $\{(1, 4.5), (2, 6), (3, 10), (4, 14.5)\}$
- B** $\{(1, 5), (2, 6), (3, 10), (4, 15)\}$
- C** $\{(4.5, 1), (6, 2), (10, 3), (14.5, 4)\}$
- D** $\{(5, 1), (6, 2), (10, 3), (15, 4)\}$
6. What is the range of the relation shown in the graph?
- F** $\{0, 1, 2, 3, 4, 5\}$
- G** $\{1, 2, 3, 4\}$
- H** $\{4.5, 6, 10, 14.5\}$
- J** $\{5, 6, 10, 15\}$

