

LESSON
4-3 **Problem Solving**
Writing Functions

Identify the independent and dependent variables. Write a rule in function notation for each situation.

1. Each state receives electoral votes based on the number of representatives it has in the House of Representatives.

Representatives	2	4	6	8
Electoral Votes	4	6	8	10

3. Ronaldo is buying bacon that costs \$4.29 per pound.

2. Terry has 30 pieces of gum and gives 2 pieces to each of his friends.

4. A personal trainer charges \$50 for the first session and \$40 for every session thereafter.

International travel and business require the conversion of American dollars into foreign currency. During part of 2005, one American dollar was worth 6 Croatian Kuna. Select the best answer.

5. An American bank wishes to convert d dollars into kuna. Which function rule describes the situation?

A $f(d) = \frac{d}{6}$ **C** $f(d) = \frac{6}{d}$
B $f(d) = 6d$ **D** $f(d) = d + 6$

7. Macon has \$100 and is thinking about converting some of it into kuna. What is a reasonable range for this situation?

A $0 \leq y \leq 6$ **C** $0 \leq y \leq 100$
B $0 \leq y \leq 16.7$ **D** $0 \leq y \leq 600$

8. Robin converts x dollars into y kuna. Which expression is the independent variable in this situation?

F x **H** $6x$
G y **J** $6y$

6. A Croatian company already has \$100,000 and is going to convert k kuna into dollars. Which function rule can be used to determine the total amount of American dollars this company will have?

F $f(x) = 100,000 + 6k$
G $f(x) = 100,000 + \frac{k}{6}$
H $f(x) = 100,000k + 6$
J $f(x) = 100,000 + \frac{6}{k}$

9. Jakov converts n kuna into c dollars. Which expression is the dependent variable in this situation?

A n **C** $\frac{n}{6}$
B c **D** $\frac{c}{6}$