

Enrichment Worksheet 6-3

Money Problems

When a problem involves money, you may need to consider both the amount of money and the number of coins or bills involved. Here is an example.

Suppose that you have two dimes and two nickels. How many different amounts can you make with these coins?

To solve the problem, you can make a list like the one at the right. Notice that there are eight different combinations of the coins. However, there are only six different amounts – 5¢, 10¢, 15¢, 20¢, 25¢, and 30¢.

Number of dimes	Number of nickels	Amount
2	0	20¢
2	1	25¢
2	2	30¢
1	0	10¢
1	1	15¢
1	2	20¢
0	1	5¢
0	2	10¢

Solve by making a list.

- How many different amounts of money can you make with three dimes and three nickels?
- How many different amounts of money can you make with two \$10 bills and three \$5 bills?
- How many different amounts of money can you make with one quarter, one dime, and two nickels?
- How many different amounts of money can you make with one \$20 bill, one \$10 bill, and two \$5 bills?
- Using only dimes and nickels, how many different ways can you make change for a dollar?
- Bus fare is 50¢, and it can only be paid in nickels, dimes, and quarters. How many different ways can you pay the fare?
- CHALLENGE** Danny has some coins that amount to more than one dollar, but he still cannot make change for a dollar. What is the greatest number of coins he could have?