

9.3

SOLVING PROBLEMS WITH TWO VARIABLES

Old Method

Solving with only one variable

John has 15 coins, all dimes and quarters, worth \$2.55. How many dimes and how many quarters does John have?

| | <i>No.</i> | <i>X</i> | <i>Value=</i> | <i>Total</i> |
|--------|------------|----------|---------------|--------------|
| Cereal | | | | |
| Fruits | | | | |

NEW Method

Solving with two variables

John has 15 coins, all dimes and quarters, worth \$2.55. How many dimes and how many quarters does John have?

Example 2

The sum of two numbers is 5. The larger number is 14 more than twice the smaller number. Find the numbers.

Example 3

A pet shop sold 23 puppies and kittens in one week. They sold 9 more puppies than kittens. How many of each did they sell?

Example 4

A bank teller has 112 5-dollar bills and 10-dollar bills for a total of \$720. How many of each does the teller have?

Example 5

If you buy six pens and one mechanical pencil, you'll get on \$1 change for your \$10 bill. But if you buy four pens and two mechanical pencils, you'll get \$2 change. How much does each pen and pencil cost?