



Two- and Three-Variable Word Problems

A. All these problems can be solved using two variables.

1. The sum of two numbers is 97. Their difference is 7. Find the numbers.
2. One number exceeds another number by 25. Their sum is 59. What are the two numbers?
3. There were 326 students at the high school dance. There were 24 more girls than boys. How many girls and boys attended?
4. A newsstand sells the *New York Times* at 75¢ per copy and the *Globe and Mail* at 60¢ per copy. If the stand sells 177 newspapers and the total receipts are \$116.00, how many of each paper were sold?
5. A number exceeds another by 13. The sum of 3 less than twice the greater number and 4 more than 3 times the lesser number is 112. What are the two numbers?
6. The sum of the digits of a two-digit number is 11. The new number obtained when the digits are reversed is 45 less than the original number. What is the original number?
7. Six years ago, Jack was three times older than Wade. In four years, Wade will be half as old as Jack. How old are they now?
8. If 1 is subtracted from both the numerator and denominator of a fraction, the resulting fraction equals $\frac{1}{4}$. Find the fraction if the numerator is 4 less than the denominator.
9. Mike rows 6 km downstream in 40 minutes. It takes him 2 hours to row back. Find Mike's rowing rate in still water and the rate of the current.
10. A small plane flies against the wind from Calgary to Vancouver, a total distance of 960 km, in 6 hours. The return trip, with the wind, takes 4 hours. Find the wind speed and the speed of the plane in calm air.