Solve each word problem. Show all work on a separate sheet of paper.

1. The sum of two numbers is 36. The difference in the two numbers is 8. Find the numbers.
2. Two numbers have a sum of 63. If one number is 11 less than the other number, find the two numbers.
3. How much of a 10% alcohol solution should be mixed with a 40% alcohol solution to obtain 150 gallons of a solution that is 20% alcohol.
4. A 2% solution of sulfuric acid was mixed with a 12% solution of sulfuric acid to produce an 8% solution. How much of each solution should be used to produce 28 liters of 8% solution.
5. A total of $8000 is invested, part at 3% and the rest at 4% per year. If the annual

return on these investments is $275, how much is invested at each rate?

1. A man invested a total of $1200 into two accounts, one paying a 4% dividend, the

other paying a 6% dividend. The total interest earned was $57. How much was

invested into each account?

1. The perimeter of a rectangle is 32 cm. The length is 1 cm more than twice the width. Find the dimensions of the rectangle.
2. The perimeter of a rectangle is 42 m. The length is 3m more than twice the width. Find the dimensions of the rectangle
3. In the Ohio River, Emily can row 48 km downstream in 4 hours but it takes her 6 hours to row the same distance upstream. Find the rate she rows in still water and the rate of the current.
4. Joe flew his small airplane 900 km in 5 hours with the wind. He flew 700 km against the wind in 7 hours. Find the rate he flew in still air and the rate of the wind.
5. The cost of 4 boxes of small paperclips and 9 boxes of large paperclips is $15.75. Eight boxes of small clips 7 boxes of large ones cost $16.65. Find the cost of a box of each size of paperclip.
6. The cost of 3 bedspreads and 6 pillows is $539.73. Two bedspreads and 4 pillows cost $359.82. Find the cost of each bedspread and each pillow.