

GroupDoThis 1.4

Name	Lab hour

Solve the following story problems by following the steps outlined. Show your work for full credit.

1. The perimeter of a rectangle is 75 inches. The length of this rectangle is twice the width. Find the length and width. (Follow the steps outlined below.)

Define your variable. I suggest w = width.

If w is the width, give an expression for length. (Use the fact that the length is twice the width.)

Create a verbal model using the formula for perimeter. (Remember the perimeter of a rectangle is two times the length plus two times the width.)

Use the verbal model to make an equation and solve the equation. Circle and label your final answers.

2. Betsy, a recent retiree, requires \$6000 per year in extra income. She has \$50,000 to invest and can invest in B-rated bonds paying 15% per year or in a Certificate of Deposit (CD) paying 7% per year. If she splits her \$50,000 between the two accounts, how much must she invest in each in order to realize exactly \$6000 in interest in one year? You may assume simple interest. (Follow the steps outlined below.)

Define your variable. I suggest you let x = amount invested in the 15% account. If we do this, give an expression for the amount invested in the 7% account.

Create a verbal model. (Remember her income will be made up of the interest earned from the first account plus the interest earned from the second account. Since it's simple interest, the interest earned is the interest rate times the amount invested.)

Use the verbal model to make an equation and solve the equation. Circle and label your final answers.