

Steps to solve a word problem:

1. Read the problem 2-3 times
2. Try to rephrase the problem in your own words without looking at the problem
3. Define variable(s)
4. Sketch a diagram (if applicable)
5. Express other unknowns in terms of the variable
6. Set up an equation

Examples:

1. Jack invests \$1000 at a certain annual interest rate, and he invests another \$2000 at an annual rate that is one-half percent higher. If he receives a total of \$190 interest in one year, at what rate is the \$1000 invested?
2. A gardening enthusiast wishes to fence in three adjoining garden plots. If each plot is to be 80 ft^2 in area, and she has 88 ft of fencing material at hand, what dimension should each plot have?
3. A health clinic uses a solution of bleach to sterilize petri dishes in which cultures are grown. The sterilization tank contains 100 gal of a solution of 2% ordinary household bleach mixed with pure diluted water. New research indicates that the concentration of bleach should be 5% for complete sterilization. How much of the solution should be drained and then replaced with bleach to increase the bleach content to the recommended level?
4. Stan and Hilda can mow the lawn in 40 min if they work together. If Hilda works twice as fast as Stan, how long does it take Stan to mow the lawn alone?
5. A woman cycles 8 mi/h faster than she runs. Every morning she cycles 4 mi and runs $2\frac{1}{2}$ mi, for a total of one hour of exercise. How fast does she run?