Solving Mixture and Interest Problems

A. Ziggy's Famous Yogurt blends regular yogurt that is 3% fat with its no-fat yogurt to obtain low-fat yogurt that is 1% FAT. Find how many pounds of regular yogurt and how many pounds of no-fat yogurt should be mixed to obtain 60 pounds of low-fat yogurt.

Unknowns: T = pounds of 3% Equations: T + N = 60

N = pounds of no fat 0% .03T + .0N = .01(60)

B. Find how many milliliters of 4% acid solution and how many milliliters of a 10% acid solution must be mixed to obtain 54 ml of a 6% solution.

Unknowns: F = milliliters of 4% acid Equations: F + T = 54

T = milliliters of 10% acid .04F + .10T = .06 (54)

C. Cashews sell for \$1.20 per bag and Brazil nuts sell for \$1.50 per bag. Find how many pounds of cashews should be mixed with 20 pounds of Brazil nuts to get a mixture that sells for \$1.30 per bag.

Unknowns: C = pounds of Cashews Equations:

M = pounds of total Mix

D. Kay invested \$3000 and received a total of \$230 in interest. If she invested part of the money at 10% and the remainder at 5%, find how much she invested at each rate.

Unknowns: T = dollars at 10% Equations: T + F = 3000

F = dollars at 5% .10T + .05F = 230