
Solve the following problems. Set up the equations, and then use augmented matrices (and the Gauss-Jordan method) to solve the resulting system.

1. An apparel shop sells skirts for \$45 and blouses for \$35. Its entire stock is worth \$51,750. But sales are slow and only half the skirts and two-thirds of the blouses are sold, for a total of \$30,600. How many skirts and blouses are left in the store?
2. An investor plans to invest \$70,000 in a mutual fund, corporate bonds, and a fast food franchise. She plans to put twice as much in bonds as in the mutual fund. Based on past performance, she expects the mutual fund to pay a 2% dividend, the bonds 10%, and the franchise 6%. She would like a dividend income of \$4800. How much should she put in each of the three investments?
3. Shirley Cicero has \$16,000 invested in Boeing and GE stock. The Boeing stock currently sells for \$30 a share and the GE stock for \$70 a share. If GE stock triples in value and the Boeing stock goes up 50%, her stock will be worth \$34,500. How many shares of each stock does she own?
4. Pretzels cost \$3 per pound, dried fruit \$4 per pound, and nuts \$8 per pound. How many pounds of each should be used to produce 140 pounds of trail mix costing \$6 per pound in which there are twice as many pretzels (by weight) as dried fruit?