#4. The Enormous State University History Department offers three courses, Ancient, Medieval, and Modern History, and the chairperson is trying to decide how many sections of each to offer this semester. The department is allowed to offer 45 sections total, there are 5,000 students who would like to take a course, and there are 60 professors to teach them. Sections of Ancient History have 100 students each, sections of Medieval History hold 50 students each, and sections of Modern History have 200 students each. Modern History sections are taught by a team of 2 professors, while Ancient and Medieval History need only 1 professor per section. How many sections of each course should the chair schedule in order to offer all the sections that they are allowed to, accommodate all of the students, and give one teaching assignment to each professor?
#6. In 2009, total revenues from digital sales of pop/rock, tropical (salsa/merengue/cumbia/bachata), and urban (reggaeton) Latin music in the U.S. amounted to $28 million. Tropical music brought in twice as much as urban music, and pop/rock music brought in $10 million more than the others combined. How much revenue was earned from digital sales in each of the three categories?
#7. The Airbus A330-300s seat 320 passengers and cost $200 million each, Boeing 767-200ERs seat 250 passengers and cost $125 million each, while Boeing Dreamliner 787-9s seat 275 passengers and cost $200 million each. You are the purchasing manager of an airline company and have a spending goal of $2,900 million for the purchase of new aircraft to seat a total of 4,480 passengers. Your company has a policy of supporting U.S. industries, and you have been instructed to buy twice as many Dreamliners as Airbus A330-300s. Given the selection of three aircraft, how many of each should you order?

#8. Refer to Exercise 7. Rene DuFleur has just been appointed the new CEO of your airline, and you have received instructions that the company policy is now to purchase 25% more Airbus A330-300s than Boeing 767-200ERs (that is, 1.25 times as many Airbus A330-300s as 767-200ERs). Further, the desired seating capacity has been revised downward to 2,600 passengers, and the cost target to $1,500 million. Given the selection of three aircraft, how many of each should you order?
#9. A bagel store orders cream cheese from three suppliers, Cheesy Cream Corp. (CCC), Super Smooth and Sons (SSs), and Bagel’s Best Friend Co. (BBF). One month, the total order of cheese came to 100 tons (they do a booming trade). The costs were $80, $50, and $65 per ton from the three suppliers, respectively, with total cost amounting to $5,990. Given that the store ordered the same amount from CCC and BBF, how many tons of cream cheese were ordered from each supplier?

#10. The bagel store’s outlay for cream cheese the following month was $2,310, when it purchased a total of 36 tons. Two more tons of cream cheese came from Bagel’s Best Friend Co. than from Super Smooth and Sons. How many tons of cream cheese came from each supplier?
#37. The following is the simplified model of the determination of the money stock.

\[ M = C + D \]
\[ C = 0.2D \]
\[ R = 0.1D \]
\[ H = R + C \]

Where

- \( M \) = money stock
- \( C \) = currency in circulation
- \( R \) = bank reserves
- \( D \) = deposits of the public
- \( H \) = high-powered money

#38. With the model in the previous exercise, if \( H \) were equal to $42 billion, what would \( M \) equal?