

1. In one day, Glovers, Inc., sold 20 pairs of gloves. Fleece gloves sold for \$24.95 per pair and Gore-Tex gloves sold for \$37.50 per pair. If that day's receipts totaled \$687.25, not including tax, how many pairs of each type of glove were sold?
2. Tatianna Tea's sells loose Black tea for \$0.95 per ounce and Lapsang Souchong tea for \$1.43 per ounce. Tatianna wants to mix these teas to create a 1 pound blend that she plans to call the Imperial Blend. If she plans to sell the blend for \$1.10 per ounce, how many ounces of each type of tea should she use?
3. Braving blizzard conditions on the planet Hoth, Luke Skywalker sets out at top speed in his snow speeder for a rebel base 3600 miles away. He travels into a steady headwind, and makes the trip in two hours. Returning, he finds that the trip back, still at top speed but now with a tailwind, takes only 1.5 hours. Find the top speed of Luke's snow speeder and the speed of the wind.
4. The Doors Company makes personal computers. It has found that each standard model requires 4 hours to manufacture electronics and 2 hours for the case. The top-of-the-line model requires 5 hours for the electronics and 1.5 hours for the case. On a particular production run, the company has available 200 hours in the electronics department and 76 hours in the cabinet department. How many of each model can be made?
5. Frank has a strip of paper that is 39 inches long. He wants to cut it into two pieces, one that is 9 inches shorter than the other. How long should each piece of the paper strip be after he cuts it?
6. A boat travels 57 km downstream in 3 hours, turns around, and travels upstream 55 km in 5 hours. If the boat travels at a constant speed, what are the speed of the boat and the speed of the current?
7. A chemist has some 40% acid solution and some 60% acid solution. How many liters of each should be used to make 40 liters of a 45% acid solution?
8. A student bought some candy bars, paying \$0.25 each for one brand and \$0.50 each for another brand. If her 22 candy bars cost her \$8.50, how many of each brand of candy bar did she buy?
9. "Artic Antifreeze" is 18% alcohol and "Frost No-More" is 10% alcohol. How many liters of each should be combined to get 20 liters of a mixture that is 15% alcohol?
10. Cecilia makes a \$9.25 purchase at the bookstore with a \$20 bill. Since the cashier has no bills, she gives Cecilia her change in quarters and fifty-cent pieces. If there were 30 coins in all, how many of each type of coin did she receive?
11. On an 8-day business trip, Clay rented a car for \$32 per day at weekday rates and \$19 per day at weekend rates. If his total rental bill was \$217, how many days did he rent at each rate?
12. Two cars start from points 420 miles apart and travel toward each other. They meet after 3.5 hours, Find the average speed of each car if one travels 30 miles per hour slower than the other.