

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 the revenue for the day was \$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 3,600 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. Determine the top speed of Luke's snow speeder and the speed of the wind.
4. A manufacturer of personal computers makes two models, a standard model and a top-of-the-line model. It takes 4 hours to make the electronics and 2 hours to make the case for the standard model and 5 hours to make the electronics and 1.5 hours to make the case for the top-of-the-line model. 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. After he cuts the strip, what is the length of each piece?
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 a 40% acid solution and a 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 twenty-two candy bars cost her \$8.50, how many of candy bars of each brand did she buy?
9. *Artic Antifreeze* is 18% alcohol and *Frost No-More Antifreeze* is 10% alcohol. How many liters of each should be combined to create 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 Cecilia receive?
11. On an 8-day business trip, Clay rented a car at the weekday rate of \$32 per day and the weekend rate of \$19 per day. If his total rental bill was \$217, without tax, how many days did he rent the car at each rate?
12. Two cars start from points 420 miles apart and travel toward each other. They are parked next to one another at the same location after 3.5 hours, Determine the average speed of each car if one car travels 30 miles per hour slower than the other car.