

57. **TX TAKS REASONING** A company produces gas mowers and electric mowers at two factories. The company has orders for 2200 gas mowers and 1400 electric mowers. The production capacity of each factory (in mowers per week) is shown in the table.

	Factory A	Factory B
Gas mowers	200	400
Electric mowers	100	300

Describe how the company can fill its orders by operating the factories simultaneously at full capacity. Write and solve a linear system to support your answer.

58. **TX TAKS REASONING** The cost of 11 gallons of regular gasoline and 16 gallons of premium gasoline is \$58.55. Premium costs \$.20 more per gallon than regular. What is the cost of a gallon of premium gasoline?
- (A) \$2.05      (B) \$2.25      (C) \$2.29      (D) \$2.55

59. **TABLE TENNIS** One evening, 76 people gathered to play doubles and singles table tennis. There were 26 games in progress at one time. A doubles game requires 4 players and a singles game requires 2 players. How many games of each kind were in progress at one time if all 76 people were playing?



60. **TX TAKS REASONING** A local hospital is holding a two day marathon walk to raise funds for a new research facility. The total distance of the marathon is 26.2 miles. On the first day, Martha starts walking at 10:00 A.M. She walks 4 miles per hour. Carol starts two hours later than Martha but decides to run to catch up to Martha. Carol runs at a speed of 6 miles per hour.
- Write an equation to represent the distance Martha travels.
  - Write an equation to represent the distance Carol travels.
  - Solve the system of equations to find when Carol will catch up to Martha.
  - Carol wants to reduce the time she takes to catch up to Martha by 1 hour. How can she do this by changing her starting time? How can she do this by changing her speed? *Explain* whether your answers are reasonable.
61. **BUSINESS** A nut wholesaler sells a mix of peanuts and cashews. The wholesaler charges \$2.80 per pound for peanuts and \$5.30 per pound for cashews. The mix is to sell for \$3.30 per pound. How many pounds of peanuts and how many pounds of cashews should be used to make 100 pounds of the mix?
62. **AVIATION** Flying with the wind, a plane flew 1000 miles in 5 hours. Flying against the wind, the plane could fly only 500 miles in the same amount of time. Find the speed of the plane in calm air and the speed of the wind.
63. **CHALLENGE** For a recent job, an electrician earned \$50 per hour, and the electrician's apprentice earned \$20 per hour. The electrician worked 4 hours more than the apprentice, and together they earned a total of \$550. How much money did each person earn?