

# Practice 7-4

## Applications of Linear Systems

Use a system of linear equations to solve each problem.

1. Your science test is worth 100 points and contains 38 questions. There are two-point and five-point questions on the test. How many of each type of question are on the test?  
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2. Suppose you are starting a cleaning service. You have spent \$315 on supplies. To clean a house, you use \$4 worth of supplies. You charge \$25 per house. How many houses must you clean to break even?  
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3. The baseball team and the softball team had fundraisers to buy supplies for their trip to the championship game. The baseball team spent \$135 buying six cases of juice and one case of bottled water. The softball team spent \$110 buying four cases of juice and two cases of bottled water. How much did a case of juice cost? How much did a case of bottled water cost?  
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4. Rachele spends 330 min/wk exercising. Her ratio of time spent on aerobics to time spent on weight training is 6 to 5. How many minutes per week does she spend on aerobics? How many minutes per week does she spend on weight training?  
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5. Suppose you invest \$1530 in equipment to put your school logo on T-shirts. You buy each T-shirt for \$3. After you have placed the logo on a shirt, you sell the shirt for \$20. How many T-shirts must you sell to break even?  
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6. Suppose you bought supplies for a party. Three rolls of streamers and 15 balloons cost \$30. Later, you bought 2 rolls of streamers and 4 balloons for \$11. How much did each roll of streamers cost? How much did each balloon cost?  
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