

Going to the Game (systems)

Name _____

Professional sports such as MLB, the NBA, NFL and NHL make millions of dollars every year on souvenirs and concessions sold at their stadiums. There is typically only one or two days a year that there is not a single game being played in one of these leagues. This is typically the day before and/or after the MLB All-Star Game held in July. Three of the leagues are currently playing now, with the NHL and NBA each nearing their championships. Lets try some algebra problems around concessions and souvenirs sales at professional sports stadiums. Try to write and solve algebra equations to determine the solution for each problem. Each problem represents a different stadium; so finding the cost of a soda in one problem does not mean that a soda is that price in another problem.

1. Write an algebra equation for each purchase. I bought an ice cream treat and a bottle of water for \$10. Pam purchased an ice cream treat and two bottles of water for \$14. Use your equations and reasoning skills to find the price of a bottle of water and an ice cream treat.

2. Betty purchased two hotdogs and one soda for \$11. Jose and his family purchased two hotdogs and three sodas for \$17. Write an equation for Betty's purchase using "h" for the price of a hotdog and "d" as the price of a soda. Do the same for Jose's purchase. Determine the cost of a hotdog and a soda.

3. Lucy's family purchased one sweatshirt and four tee shirts for a total of \$110. Mark's family picked up three sweatshirts and four tee shirts for a total of \$200. Write algebra equations for each purchase in the same way you did in problem one. Use your equations to find the cost of a tee shirt and a sweatshirt.

4. Keith bought a hat and a poster for \$26. Sarah's family purchased four hats and two posters for \$88. Write equations for each purchase. Solve your equations to find the cost of a hat and a poster.

5. Zach bought a cheeseburger and bottle of water for \$9. Jasmine got an order of nachos and a bottle of water for \$8. Mr. Johnson purchased five bottles of water for his family for \$15. Write equations for each purchase. Solve your equations to find the cost of a bottle of water, order of nachos and a cheeseburger.

6. Louis bought a burger and soda for \$8. Kate purchased a slice of pizza and soda for \$9. Biff purchased a burger, a slice of pizza and a soda for \$13.50. Write equations for each purchase. Solve your equations to find the cost of a burger, slice of pizza and a soda. This one is a little tougher, you may need to play around with the equations a little and see what you can logically figure out.

7. Michael and Dwight went to see the playoff game. The each purchased some food. The equation below models what they bought. Write up a short story about what they purchased and how much these two items cost. Make sure to describe what each variable could stand for and what the numbers in the equation stand for.

$$3b + d = 17$$

$$5b + d = 27$$