

Electricians In Exercises 19-21, use the following information.

The yellow pages identify two different local electrical businesses. Business A charges \$50 for a service call, plus an additional \$36 per hour for labor. Business B charges \$35 for a service call, plus an additional \$39 per hour for labor.

19. Let x represent the number of hours of labor and let y represent the total charge. Write a system of equations you could solve to find the length of a service call for which both businesses charge the same amount.
20. Solve the system.
21. Which company would you use? Why?

$$\begin{aligned} 19) \quad y &= 36x + 50 \\ y &= 39x + 35 \\ 39x + 35 &= 36x + 50 \\ 3x &= 15 \\ x &= 5 \end{aligned}$$

$$20) \quad (5, 230)$$

21) A if > 5 hrs, B if < 5 hrs.

Travel Agency In Exercises 22 and 23, use the following information.

A travel agency offers two Boston outings. Plan A includes hotel accommodations for three nights and two pairs of baseball tickets worth \$518. Plan B includes hotel accommodations for five nights and four pairs of baseball tickets worth \$907.

22. Let x represent the cost of one night's hotel accommodation and let y represent the cost of one pair of baseball tickets. Write a system of equations you could solve to find the cost of one night's hotel accommodation and one pair of baseball tickets.
23. Solve the system.

$$\begin{aligned} 22) \quad 3x + 2y &= 518 \\ 5x + 4y &= 907 \end{aligned}$$

$$23) \quad (129, 65.5)$$

Highway Project In Exercises 24 and 25, use the following information.

There are sixteen workers employed on a highway project, some at \$200 per day and some at \$165 per day. The daily payroll is \$2745.

24. Let x represent the number of \$200 per day workers and let y represent the number of \$165 per day workers. Write a system of equations to find the number of workers employed at each wage.
25. Solve the system.

$$\begin{aligned} 24) \quad x + y &= 16 \\ 200x + 165y &= 2745 \end{aligned}$$

$$25) \quad (3, 13)$$

Cookout In Exercises 19 and 20, use the following information.

You are buying the meat for a cookout. You need to buy 8 packages of meat. A package of hotdogs costs \$1.89 and a package of hamburgers costs \$5.19. You spend a total of \$31.62.

19. Let x represent the number of packages of hotdogs bought and let y represent the number of packages of hamburgers bought. Write a system of equations you could solve to find the number of packages of each type of meat bought.

20. Solve the system.

$$(3, 5)$$

$$19) \quad x + y = 8$$

$$1.89x + 5.19y = 31.62$$

21. **Baseball Glove Sales** A sporting goods store sells right-handed and left-handed baseball gloves. In one month, 12 gloves were sold for a total revenue of \$561. Right-handed gloves cost \$45 and left-handed gloves cost \$52. Find the number of each type of glove sold.

$$x + y = 12$$

$$45x + 52y = 561$$

$$(9, 3)$$

22. **Southern Cuisine** Your family goes to a Southern-style restaurant for dinner. There are 6 people in your family. Some order the chicken dinner for \$14.80 and some order the steak dinner for \$17. If the total bill was \$91, how many people ordered each dinner?

$$x + y = 6$$

$$14.80x + 17y = 91$$

$$(5, 1)$$