

A Trip With Two-Step Equations



Tyler and his family took a train into Philadelphia for the day. Write and solve an equation for each problem.

- 1** Tyler's mom had a coupon for \$4 off each of the train tickets. If they bought 5 train tickets and paid a total of \$145, what was the original cost of each ticket?

$$5(x - 4) = 145$$

$$x = 33$$

The original cost of each ticket was \$33.

- 2** When they arrived in Philadelphia, Tyler's family took a taxi to a museum. The taxi charged \$2.70 per mile, and they paid the driver a \$3.00 tip. If they paid a total of \$16.50 for the taxi ride, about how far was the museum from the train station?

$$2.7x + 3 = 16.5$$

$$x = 5$$

The museum was about 5 miles from the train station.

- 3** When they arrived at the museum, Tyler's dad went to the ticket counter. For each of the 5 members of the family, he purchased a general admission ticket for \$8.75 and a ticket to see a special exhibit. He paid a total of \$70. How much did each ticket to the special exhibit cost?

$$5(x + 8.75) = 70$$

$$x = 5.25$$

Each ticket to the special exhibit cost \$5.25.

- 4** Tyler and his family had lunch at the museum cafeteria. Each person ordered a sandwich that cost the same amount, and they got \$5 off their entire purchase with proof of admission to the special exhibit. If they paid a total of \$35 after the discount, how much did each sandwich cost?

$$5x - 5 = 35$$

$$x = 8$$

Each sandwich cost \$8.

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Keep going! Write and solve an equation for each problem.

- 5** After lunch, Tyler's family went on a sightseeing trolley tour. They purchased 2 adult tickets and 3 child tickets. Tyler's mom was pleased to find that the combined cost for the 3 child tickets was only \$27. If they paid \$62.50 in total for the trolley tour, what was the price of each adult ticket?

$$2x + 27 = 62.50$$

$$x = 17.75$$

The price of each adult ticket was \$17.75.

- 6** Tyler's family spent 90 minutes on the trolley sightseeing tour. If they spent 36 minutes riding the trolley and about 9 minutes stopped at each sight, how many sights did they stop at?

$$9x + 36 = 90$$

$$x = 6$$

They stopped at 6 sights.

- 7** After the tour, Tyler's mom bought a pretzel and a bottle of water for each family member. The bottles of water cost \$1.50 each. If she paid a total of \$30, how much did each pretzel cost?

$$5(x + 1.5) = 30$$

$$x = 4.5$$

Each pretzel cost \$4.50.

- 8** Before the trip, Tyler read 24 pages of his Philadelphia guidebook in an hour. The guidebook is 84 pages long. If he continued to read it at the same rate, how long did it take Tyler to finish reading the guidebook before his family's trip?

$$24x + 24 = 84$$

$$x = 2.5$$

It took Tyler 2.5 hours to finish reading the guidebook.