

Using Order of Operations to Write Equations

Write an equation to solve each problem. Then solve the equation. Be sure to show how you solve.

1. Kathleen had five stickers on each page of her sticker collection. She added 2 stickers to each page. If she had 30 pages in the collection, how many stickers did she have then?

2. For a girl guides trip, the leaders rented 6 mini-vans. Each mini-van holds 8 passengers. Each of the 8 mini-vans were full, but at the last minute, 3 girls decided not to go. How many girl guides went on the trip?

3. One Saturday last summer, 5 girls held a car wash to earn money. They charged \$10 for each car they washed. They washed a total of 18 cars and collected an extra \$15 in tips. If they divide the money equally, how much will each girl receive?

4. At the school carnival, one club sold fruit smoothies to fund the club's 3 projects. They charged \$3.50 each for the smoothies. They sold 120 fruit smoothies and collected \$15 in tips. If they divide the money equally between the 3 projects, how much money will they have for each project?

5. The club bought 75 calendars for \$3.00 each and sold them for \$4.50 each. How much profit did they make?

6. George bought 3 gallons of paint at \$17.00 per gallon and 3 quarts of stain at \$9.00 per quart. Including a tax of \$5.46, what was the total cost?

Equations and solutions:

1. $30 \times (5 + 2) = s$ $s = 210$ stickers

2. $6 \times 8 - 3 = g$ or $(6 \times 8) - 3 = g$ $g = 45$ girl guides

3. $(18 \times \$10 + \$15) \div 5 = m$ or $[(18 \times \$10) + \$15] \div 5 = m$
or $\frac{18 \times \$10 + \$15}{5} = m$ $m = \$39$

4. $(120 \times \$3.50 + \$15) \div 3 = p$ or variations as in #3. $p = \$145$

5. $75 \times (\$4.50 - \$3.00) = p$ $p = \$112.50$

6. $(3 \times \$17.00) + (3 \times \$9.00) + \$5.46 = c$ $c = \$83.46$