

Problem Solving with Whole Numbers

Name Solutions

1. What operation is associated with each of the following words?

total $+$
 double $\times 2$
 goes into \div
 reduced by $-$

shared equally \div
 loss $-$
 triple $\times 3$
 altogether $+$

For each problem, decide which mathematical operation(s) is appropriate to use and then find the answer. Show your thinking with words, symbols and/or pictures. Write your answer in a complete sentence.

2. Find the total number of calories in the following lunch from McDonald's: Big Mac (540 calories), small French fries (230 calories), Fruit 'n Yogurt Parfait (160 calories), medium Coca-Cola Classic (210 calories).

Mathematical Operation(s):

addition

Solution:

$$\begin{array}{r}
 540 \\
 230 \\
 160 \\
 + 210 \\
 \hline
 1,140 \text{ calories}
 \end{array}$$

The total number of calories is 1,140.

3. A movie theater makes a \$4 profit on each ticket sold. How many tickets must be sold to make a profit of \$2,500?

Mathematical Operation(s):

Division

Solution:

$$\begin{array}{r}
 625 \\
 4 \overline{) 2500} \\
 \underline{-24} \\
 10 \\
 \underline{-8} \\
 20 \\
 \underline{-20} \\
 0
 \end{array}$$

625 tickets must be sold.

4. A savings account contained \$1,370. After a withdrawal of \$197 and a deposit of \$340, how much is now in the account.

Mathematical Operation(s):

subtract
then
add

Solution:

$$\begin{array}{r} \$1,370 \\ -197 \\ \hline 1,173 \\ +340 \\ \hline 1,513 \end{array}$$

There is \$1,513 in the account.

5. How many tablets should a pharmacist give a person who needs to take 2 tablets 3 times a day for 14 days?

Mathematical Operation(s):

multiplication

Solution:

$$2 \cdot 3 = 6 \text{ tablets per day}$$

$$\begin{array}{r} 14 \\ \times 6 \\ \hline 84 \end{array} \text{ tablets total.}$$

The pharmacist needs to give 84 tablets.

6. The cost of a student parking pass at PCC is \$45 per term if you buy it online. If a daily pass is \$5, after how many days does a term pass pay off?

Mathematical Operation(s):

division

Solution:

$$\begin{array}{r} 9 \\ 5 \overline{)45} \\ \underline{-45} \\ 0 \end{array} \quad \text{or} \quad 45 \div 5 = 9$$

After 9 days of parking it would be cheaper to buy the parking pass.