Problem Solving with Whole Numbers Name Solutions

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

total +	shared equally ÷
double × 2	loss −
goes into ÷	triple × 3
reduced by −	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:

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

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:

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

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:

$1,370
-197
1,173
+340
1,513

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

The pharmacist needs to give 84 tablets.

Solution:

2 · 3 = 6 tablets per day

14
× 6
84 tablets total.

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:

$5\overline{)45}$ or $45 \div 5 = 9$

9
5|45
-45
0

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

7. A student athlete practices soccer for 60 minutes every week, basketball for 90 minutes and volleyball for 45 minutes. How many minutes will they practice altogether in 12 weeks?

Mathematical Operation(s):

addition and multiplication

Solution:

$$\begin{array}{r} 60 \\ +\ 90 \\ +\ 45 \\ \hline 195 \text{ min per week} \end{array}$$

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 195 \\ \times\ 12 \\ \hline 390 \\ +195 \\ \hline 2{,}340 \text{ min} \end{array}$$

Complete sentence:

They would practice for a total of 2,340 minutes.

8. A search and rescue team is searching an area of 640 square miles. The team can cover 16 square miles per day. How many days will it take the team to complete the search?

Mathematical Operation(s):

division

Solution:

$$\begin{array}{r} 40 \\ 16\overline{)640} \\ -64 \\ \hline 00 \\ -\ 0 \\ \hline 0 \end{array}$$

$$\begin{array}{r} {\scriptstyle 2} \\ 16 \\ \times\ 4 \\ \hline 64 \end{array}$$

Complete sentence:

It will take 40 days.

9. Tasha and Geneva are in a summer reading program. Tasha reads 50 pages every day and Geneva reads 5 more pages than Tasha every day. How many pages will Tasha read in 28 days?

extra info

Mathematical Operation(s):

multiplication

Solution:

$$\begin{array}{r} 50 \\ \times\ 28 \\ \hline 400 \\ +1000 \\ \hline 1400 \end{array}$$

$$\begin{array}{r} {\scriptstyle 4} \\ 28 \\ \times 50 \\ \hline 00 \\ +140 \\ \hline 1400 \end{array}$$

Complete sentence:

Tasha would read 1,400 pages.