



SKILL 20: PROBLEM SOLVING: Deciding When to Add, Subtract, or Multiply

When solving word problems involving addition, subtraction, or multiplication, it is important to know which operation to use.

Example

Sam pours 1 cup of milk on his cereal every morning. He decided to switch from whole milk to skim milk. How many calories will he save in a year (365 days)?

Read There are 150 calories in 1 cup of whole milk and 85 calories in 1 cup of skim milk.

You need to find the number of calories saved in a year.

Plan Subtract to find how many more calories whole milk has than skim milk. Once you know the number saved for 1 day, you multiply to find the number for 365 days.

Solve Subtract.

$$\begin{array}{r} 150 \text{ calories in whole milk} \\ - 85 \text{ calories in skim milk} \\ \hline 65 \text{ calories less} \end{array}$$

Multiply.

$$\begin{array}{r} 365 \text{ days in a year} \\ \times 65 \text{ calories less per day} \\ \hline 1825 \text{ calories saved in a year} \\ \hline 21900 \\ \hline 23,725 \end{array}$$

Look Back See that your answer makes sense.

Estimate: If you saved 70 calories a day for 400 days, you would save 28,000 calories. Since you rounded both numbers up, it makes sense that your estimate is greater than your answer.

Calories from Food		
Food	Measure	Calories
Apple	1	80
Carrot	1	30
Fish Stick	1	70
Skim milk	1 cup	85
Whole milk	1 cup	150

Guided Practice

Kylah had 4 fish sticks, 3 carrots, an apple, and 1 cup of skim milk.

- How many calories are in 4 fish sticks? _____
- How many calories are in 3 carrots? _____
- How many calories are in an apple? _____
- How many calories are in 1 cup of skim milk? _____
- Find the total number of calories this meal contains. _____

SKILL 20: Practice

Use the table at the right to solve each problem.

1. Clare walked 3 miles on Monday, 2 miles on Wednesday, and 4 miles on Friday. How many calories did she burn on her walks that week?
- _____

Calories Burned During Exercise		
Activity	Time	Calories
Walking 1 mi	15 min	75
Bicycling 4 mi	15 min	150
Shooting baskets	10 min	50
Swimming laps	30 min	225

2. David shoots baskets for an hour each day. Tom bicycles each day for an hour. Whose activity burns more calories? How many more?
- _____

3. Angie swam laps for 30 min, then bicycled for 30 min. Barbara swam laps for the whole hour. Who burned more calories? How many more?
- _____

4. Carol wants to burn 1,000 calories a week exercising. During one week, she walked 5 miles, bicycled 8 miles, and shot baskets for an hour. Did she reach her goal? By how much did she beat or miss her goal?
- _____

5. Greg wants to exercise each day for an hour. Doing which of the activities burns the most calories in an hour? The least?
- _____

6. If Greg chooses to shoot baskets for an hour five days a week, how many calories will he burn in a year (52 weeks)?
- _____



7. CDs are on sale for \$12 each. The regular price is \$15 each. Irene buys 6 CDs on sale. How much money does she save?

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- A \$3 C \$27
B \$18 D \$72

8. Rebecca's Newsstand started the day with 546 magazines. That day she sold 247 of the magazines. How many magazines were left?

Skill 9

- F 301 H 399
G 299 J 793