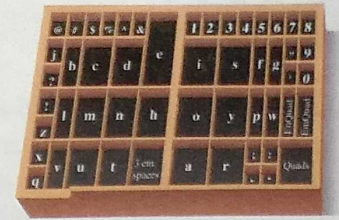


106. The Alphabet and Area Have you ever wondered which of the letters in the alphabet is the most popular? No? The box shown here is called a *typescase*, or *printer's tray*. It was used in early typesetting to store the letters that would be used to lay out a page of type. Use the box to answer the questions below.



- a. What letter is used most often in printed material?
- b. Which letter is printed more often, the letter *i* or the letter *f*?
- c. What is the relationship between area and how often a letter in the alphabet is printed?



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Exercise and Calories The table below is an extension of the table we used in Example 10 of this section. It gives the amount of energy expended during 1 hour of various activities for people of different weights. The accompanying figure is a nutrition label from a bag of Doritos tortilla chips. Use the information from the table and the nutrition label to answer Problems 107–112.

Nutrition Facts	
Serving Size 1 oz. (28g/About 13 chips)	
Servings Per Container About 2	
Amount Per Serving	
Calories 140	Calories from Fat 60
% Daily Value*	
Total Fat 7g	10%
Saturated Fat 1g	6%
Cholesterol 0mg	0%
Sodium 120mg	5%
Total Carbohydrate 18g	6%
Dietary Fiber 1g	4%
Sugars 0g	
Protein 2g	
Vitamin A 0%	Vitamin C 0%
Calcium 4%	Iron 0%
*Percent Daily Values are based on a 2,000 calorie diet	

Activity	Calories Burned Through Exercise		
	Calories Per Hour		
	120 Pounds	150 Pounds	180 Pounds
Bicycling	299	374	449
Bowling	212	265	318
Handball	544	680	816
Jazzercise	272	340	408
Jogging	544	680	816
Skiing	435	544	653

107. Suppose you weigh 180 pounds. How many calories would you burn if you play handball for 2 hours and then ride your bicycle for 1 hour?
108. How many calories are burned by a 120-lb (pound) person who jogs for 1 hour and then goes bike riding for 2 hours?
109. How many calories would you consume if you ate the entire bag of chips?
110. Approximately how many chips are in the bag?
111. If you weigh 180 pounds, will you burn off the calories consumed by eating 3 servings of tortilla chips if you ride your bike 1 hour?
112. If you weigh 120 pounds, will you burn off the calories consumed by eating 3 servings of tortilla chips if you ride your bike for 1 hour?

- 113. Water as a Resource** According to the Environmental Protection Agency, it takes about 634 gallons of water to produce one hamburger. It takes about 63 gallons of water to produce a glass of milk. If a family had a meal of 6 hamburgers and 4 glasses of milk, about how much water was used to produce that meal?
- 114. Water as a Resource** An average water faucet flows at a rate of 2 gallons per minute. If you spend 4 minutes each day brushing your teeth, you can save about 8 gallons of water every day by turning off the faucet while you brush. How much water could you save in a year (365 days)?
- 115. Smartphones and Data Usage** With some smartphones, visiting 88 web pages a day will result in a monthly data usage of 1 GB (1 gigabyte). If Macon visited 88 web pages a day in July (31 days), how many total web pages did he visit that month?
- 116. Smartphones and Data Usage** Audio streaming for some smartphones averages 60 MB (60 megabytes) per hour. Each digital photo download uses about 3 MB. If Gracie downloaded 74 photos and streamed 5 hours of music, what was her data usage?

Estimating

Mentally estimate the answer to each of the following problems by rounding each number to the indicated place and then multiplying.

- | | | |
|---|--|--|
| 117. 750 hundred
$\times 12$ ten | 118. 591 hundred
$\times 323$ hundred | 119. 3,472 thousand
$\times 511$ hundred |
| 120. 399 hundred
$\times 298$ hundred | 121. 2,399 thousand
$\times 698$ hundred | 122. 9,999 thousand
$\times 666$ hundred |