Interpret the Remainder

Erin has 87 ounces of trail mix. She puts an equal number of ounces in each of 12 bags. How many ounces does she put in each bag?

$$\begin{array}{r} 7\ r3 \\ 12\overline{)87} \\ -84 \\ \hline 3 \end{array}$$

First, divide to find the quotient and remainder. Then, decide how to use the quotient and the remainder to answer the question.

- The dividend, __87__, represents the total number of ounces of trail mix.
- The divisor, __12__, represents the total number of bags.
- The quotient, __7__, represents the whole-number part of the number of ounces in each bag.
- The remainder, __3__, represents the number of ounces left over.

Divide the 3 ounces in the remainder by the divisor, 12, to write the

remainder as a fraction: __$\frac{3}{12}$__

Write the fraction part in simplest form in your answer.

So, Erin puts __$7\frac{1}{4}$__ ounces of trail mix in each bag.

**Interpret the remainder to solve.**

1. Harry goes on a canoe trip with his scout troop. They will canoe a total of 75 miles and want to travel 8 miles each day. How many days will they need to travel the entire distance?

2. Hannah and her family want to hike 8 miles per day along a 125-mile-long trail. How many days will Hannah and her family hike exactly 8 miles?

3. There are 103 students eating lunch in the cafeteria. Each table seats 4 students. All the tables are full, except for one table. How many students are sitting at the table that is not full?

4. Emily buys 240 square feet of carpet. She can convert square feet to square yards by dividing the number of square feet by 9. How many square yards of carpet did Emily buy? (Hint: Write the remainder as a fraction.)

Biking Division

Jeff and Mario spent their summer vacation biking and camping along trails in a nearby state park. Use the map and the table of information below to solve each problem.

29 mi   32 mi

STATE PARK ←

34 mi

28 mi

35 mi   38 mi
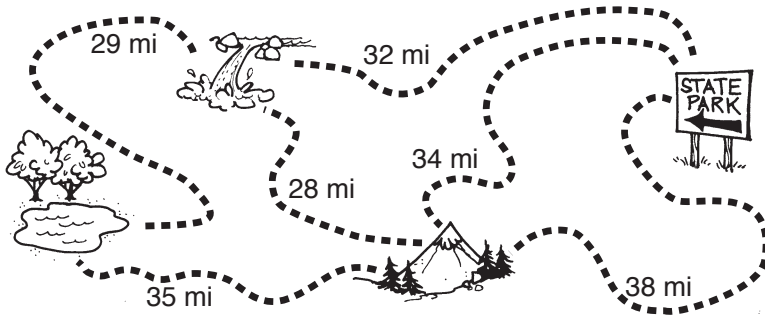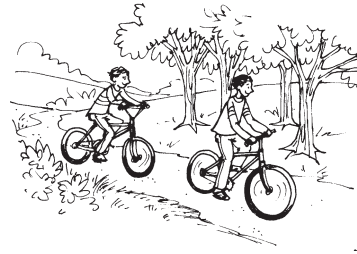
Distance, Rate, and Time	
Example: Joe drove 140 miles in 2 hours at 70 miles per hour.	
rate × time = distance	$70 \times 2 = 140$ mi
distance ÷ time = rate	$140 \div 2 = 70$ mi per hr
distance ÷ rate = time	$140 \div 70 = 2$ hr

1. Mario bikes at a rate of 7 miles per hour. If he takes the longer direct route from the park entrance to the mountain, for how many complete hours will Mario bike?

_____

2. If he continues riding at a rate of 7 miles per hour, how many hours will it take Mario to bike from the mountain to the lake along the most direct route?

_____

3. Jeff bikes at a rate of 9 miles per hour. If he bikes the most direct route from the park entrance to the waterfall, about how many hours will Jeff bike?

_____

4. From the waterfall, Jeff then bikes the direct route to the lake. His rate decreases to 8 miles per hour. For how many complete hours will Jeff bike?

_____

5. How many total miles does Jeff bike in order to go from the park entrance to the lake using the shortest distance?

_____

6. Mario bikes along the most direct route from the lake to the waterfall to meet Jeff. If he bikes 5 miles per hour, about how many hours will he bike?

_____