Name _____

Interpret the Remainder

Florida's B.E.S.T.

- **Number Sense & Operations** 5.NSO.2.2
- **Mathematical Thinking & Reasoning** MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1

I Can interpret remainders when solving a division problem.

UNLOCK the Problem Real World

Hiro and his family want to hike a trail that is 1,365 miles long. They will hike equal parts of the trail on 12 different hiking trips. How many miles will Hiro's family hike on each trip?

- Circle the dividend you will use to solve the division problem.
- Underline the divisor you will use to solve the division problem.

When you solve a division problem with a remainder, the way you interpret the remainder depends on the situation and the question. Sometimes you need to use both the quotient and the remainder. You can do that by writing the remainder as a fraction.

One Way Write the remainder as a fraction.

First, divide to find the quotient and remainder.

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

$12\overline{)1,365}$

- The _____ represents the number of trips Hiro and his family plan to take.
- The _____ represents the whole-number part of the number of miles Hiro and his family will hike on each trip.
- The _____ represents the number of miles left over.
- The remainder represents 9 miles, which can also be divided into 12 parts and written as a fraction.

$$\frac{\text{remainder}}{\text{divisor}} \rightarrow \_\_\_\_\_$$

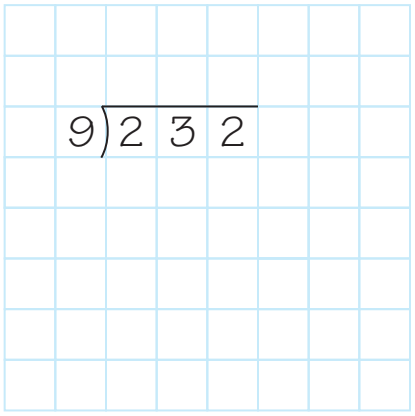
- Write the quotient with the remainder written as a fraction.

_____

So, Hiro and his family will hike _____ miles on each trip.

Another Way **Use only the quotient.**

The segment of the Appalachian Trail that runs through Pennsylvania is 232 miles long. Selena and her family want to hike 9 miles each day on the trail. How many days will they hike exactly 9 miles?



- Divide to find the quotient and the remainder.
- Since the remainder shows that there are not enough miles left for another 9-mile day, it is not used in the answer.

So, they will hike exactly 9 miles on each of _____ days.

Other Way

A **Add 1 to the quotient.**

What is the total number of days that Selena will need to hike 232 miles?

- To hike the 7 remaining miles, she will need 1 more day.

So, Selena will need _____ days to hike 232 miles.

B **Use the remainder as the answer.**

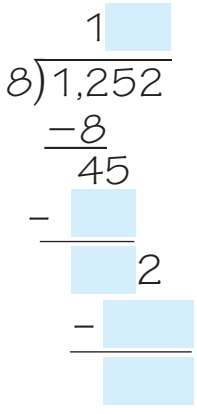
If Selena hikes 9 miles each day except the last day, how many miles will she hike on the last day?

- The remainder is 7.

So, Selena will hike _____ miles on the last day.

Try This!

A sporting goods store is going to ship 1,252 sleeping bags. Each shipping carton can hold 8 sleeping bags. How many cartons are needed to ship all of the sleeping bags?



Since there are _____ sleeping bags left over,

_____ cartons will be needed for all of the sleeping bags.

Math Talk

MTR 7.1 **Apply mathematics to real-world contexts.**

Explain why you would not write the remainder as a fraction when you find the number of cartons needed in the Try This! problem.