

Unit 4 Lesson 12: Fractional Lengths

1 Number Talk: Multiplication Strategies (Warm up)

Student Task Statement

Find the product mentally.

$$19 \cdot 14$$

2 Info Gap: How Many Would It Take?

Student Task Statement

Your teacher will give you either a *problem card* or a *data card*. Do not show or read your card to your partner.

If your teacher gives you the *problem card*:

1. Silently read your card and think about what information you need to be able to answer the question.
2. Ask your partner for the specific information that you need.
3. Explain how you are using the information to solve the problem.

Continue to ask questions until you have enough information to solve the problem.

4. Share the *problem card* and solve the problem independently.
5. Read the *data card* and discuss your reasoning.

If your teacher gives you the *data card*:

1. Silently read your card.
2. Ask your partner “*What specific information do you need?*” and wait for them to *ask* for information.

If your partner asks for information that is not on the card, do not do the calculations for them. Tell them you don’t have that information.

3. Before sharing the information, ask “*Why do you need that information?*” Listen to your partner’s reasoning and ask clarifying questions.
4. Read the *problem card* and solve the problem independently.
5. Share the *data card* and discuss your reasoning.

3 How Many Times as Tall or as Far?

Student Task Statement

1. A second-grade student is 4 feet tall. Her teacher is $5\frac{2}{3}$ feet tall.
 - a. How many times as tall as the student is the teacher?
 - b. What fraction of the teacher's height is the student's height?
2. Find each quotient. Show your reasoning and check your answer.
 - a. $9 \div \frac{3}{5}$
 - b. $1\frac{7}{8} \div \frac{3}{4}$

3. Write a division equation that can help answer each of these questions. Then find the answer. If you get stuck, consider drawing a diagram.

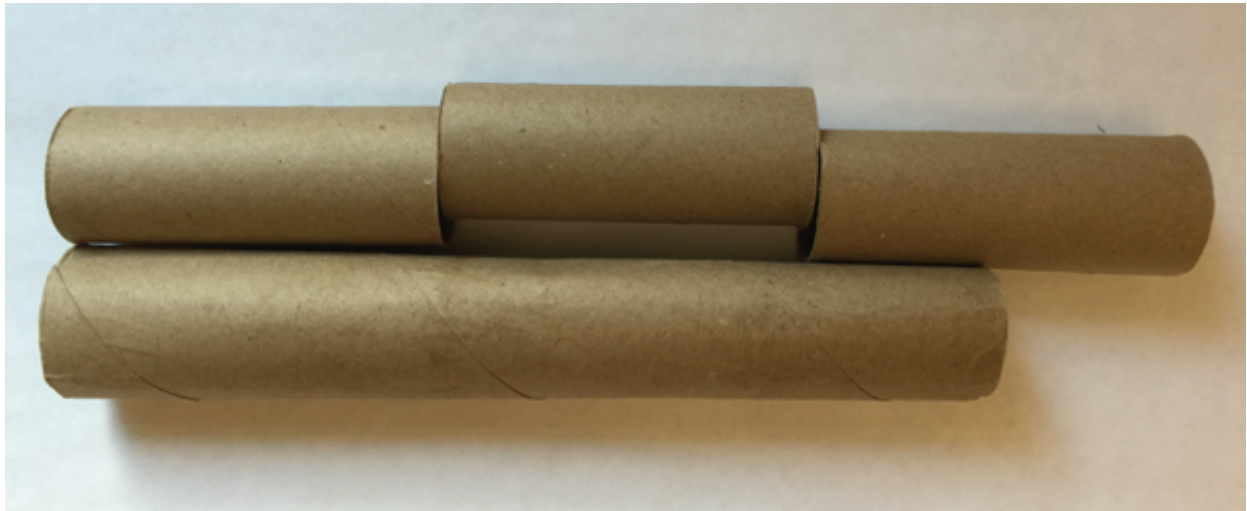
a. A runner ran $1\frac{4}{5}$ miles on Monday and $6\frac{3}{10}$ miles on Tuesday. How many times her Monday's distance was her Tuesday's distance?

b. A cyclist planned to ride $9\frac{1}{2}$ miles but only managed to travel $3\frac{7}{8}$ miles. What fraction of his planned trip did he travel?

4 Comparing Paper Rolls (Optional)

Student Task Statement

The photo shows a situation that involves fractions.



1. Complete the sentences. Be prepared to explain your reasoning.
 - a. The length of the long tube is about ____ times the length of a short tube.
 - b. The length of a short tube is about ____ times the length of the long tube.
2. If the length of the long paper roll is $11\frac{1}{4}$ inches, what is the length of each short paper roll?