Unit 4, Lesson 15

World's Record Noodle Soup

Let's solve a problem with large numbers, using division.

Warm-up

Notice and Wonder: World-Record Event

What do you notice? What do you wonder?

A Chinese food company holds the world's record for making the longest noodle. The noodle measured about 10,119 feet.



Activity 1

How Many Feet in One Serving?

A Chinese food company cooked a single noodle measuring about 10,119 feet. It served 400 people.

1. Estimate how many feet of noodle each person was served.

2. Is your estimate greater than or less than the actual length of noodle each person was served? Explain your reasoning, without calculating the actual length.

Activity 2

Han's Estimate

Han said that each person was served about $25\frac{1}{4}$ feet of noodle. Do you agree with Han? Explain or show your reasoning.

Section B Summary

We learned how to divide multi-digit whole numbers. To find a quotient such as $448 \div 16$, we break 448 into multiples of 16 and then add these partial quotients.

$$\begin{aligned} 320 \div 16 &= 20 \\ 80 \div 16 &= 5 \\ 48 \div 16 &= 3 \\ \hline 448 \div 16 &= 28 \end{aligned}$$

Then we used a familiar way to record these calculations.

$$\begin{array}{rl} \boxed{28} & \\ 3 & \\ 5 & \\ 20 & \\ 16\overline{)448} & \\ -320 & (20 \times 16) \\ \hline 128 & \\ -\ 80 & (5 \times 16) \\ \hline 48 & \\ -\ 48 & (3 \times 16) \\ \hline 0 & \end{array}$$