

Name \_\_\_\_\_

Date \_\_\_\_\_

Estimate, and then solve each problem.

1. Melissa and her mom go on a road trip. They drive 87 kilometers before lunch. They drive 59 kilometers after lunch.

- a. Estimate how many more kilometers they drive before lunch than after by rounding to the nearest 10 kilometers.

$$87 \text{ km} - 59 \text{ km} \approx 90 \text{ km} - 60 \text{ km} = \textcircled{30 \text{ km}}$$

- b. Precisely how much farther do they drive before lunch than after lunch?

$$\begin{array}{r} 87 \text{ km} \\ - 59 \text{ km} \\ \hline \textcircled{28 \text{ km}} \end{array}$$

- c. Compare your estimate from (a) to your answer from (b). Is your answer reasonable? Write a sentence to explain your thinking.

My answer is reasonable because it is close to my estimate.

2. Amy measures ribbon. She measures a total of 393 centimeters of ribbon and cuts it into 2 pieces. The first piece is 184 centimeters long. How long is the second piece of ribbon?

- a. Estimate the length of the second piece of ribbon by rounding in two different ways.

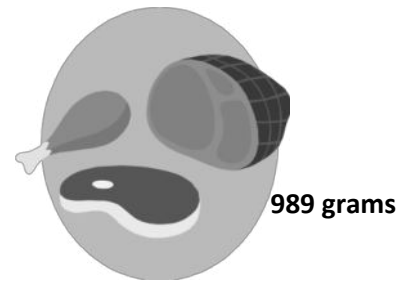
$$\begin{array}{l} 393 \text{ cm} - 184 \text{ cm} \\ \approx 400 \text{ cm} - 200 \text{ cm} \\ = 200 \text{ cm} \end{array}$$

$$\begin{array}{l} 393 \text{ cm} - 184 \text{ cm} \\ \approx 390 \text{ cm} - 180 \text{ cm} \\ = 210 \text{ cm} \end{array}$$

- b. Precisely how long is the second piece of ribbon? Explain why one estimate was closer.

$$\begin{array}{r} 393 \text{ cm} \\ - 184 \text{ cm} \\ \hline \textcircled{209 \text{ cm}} \end{array}$$

Rounding to the nearest 10's is more accurate than rounding to the nearest 100's.



3. The weight of a chicken leg, steak, and ham are shown to the right. The chicken and the steak together weigh 341 grams. How much does the ham weigh?

a. Estimate the weight of the ham by rounding.

$$989 \text{ g} - 341 \text{ g}$$

$$\approx 1000 \text{ g} - 300 \text{ g} = 700 \text{ g}$$

b. How much does the ham actually weigh?

$$\begin{array}{r} 989 \text{ g} \\ - 341 \text{ g} \\ \hline 648 \text{ g} \end{array}$$

4. Kate uses 506 liters of water each week to water plants. She uses 252 liters to water the plants in the greenhouse. How much water does she use for the other plants?

a. Estimate how much water Kate uses for the other plants by rounding.

$$506 \text{ L} - 252 \text{ L}$$

$$\approx 510 \text{ L} - 250 \text{ L} = 260 \text{ L}$$

} Rounded to nearest 10.

b. Estimate how much water Kate uses for the other plants by rounding a different way.

$$506 \text{ L} - 252 \text{ L}$$

$$\approx 500 \text{ L} - 300 \text{ L} = 200 \text{ L}$$

} Rounded to nearest 100.

c. How much water does Kate use for the other plants? Which estimate was closer? Explain why.

$$\begin{array}{r} \overset{4}{5} \overset{10}{0} 6 \text{ L} \\ - 252 \text{ L} \\ \hline 254 \text{ L} \end{array}$$

Rounding to the nearest 10's is more accurate than rounding to the nearest 100's.