Chapter 12 Real-World Problems: Measurement
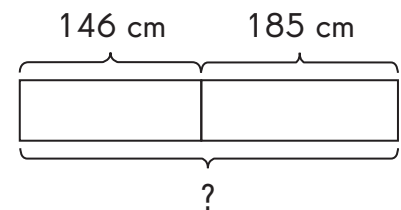
Practice 1   Real-World Problems: One-Step Problems
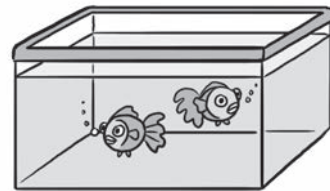
Solve. Use bar models to help you.

1.   A restaurant has two tables of different lengths.
One is 146 centimeters long. The other is 185 centimeters long.
What is their total length?
Write your answer in meters and centimeters.

146 cm	185 cm

?

2.   Jim is preparing for a race.
He runs around the track 3 times each day.
If he runs 300 meters a day, what is the length of the track?

3. A baby elephant has a mass of 145 kilograms.
The mass of its sister is 5 times as much.
What is the mass of its sister?

4. James has a fish tank with a capacity of 24 liters.
He uses a 2-liter pail to fill the tank.
How many pails of water does he use?

5. A watering can contains 980 milliliters of water.
Some water is used to water the plants.
In the end, 350 milliliters of water are left.
How much water is used to water the plants?

6. A baker has 2,000 grams of flour.
He uses 425 grams of it.
What is the mass of the flour left?
Give your answer in kilograms and grams.

7. Max buys 875 grams of nuts on Monday.
He buys 955 grams of nuts on Tuesday.
What is the total mass of nuts he buys?
Give your answer in kilograms and grams.

8. Mrs. Spence has 4 bottles of orange juice.
Each bottle contains 125 milliliters of juice.
She pours all the juice into an empty container.
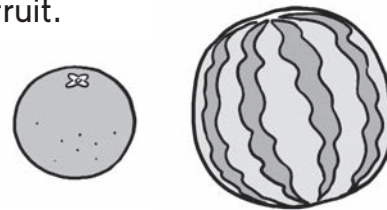How much orange juice is in the container?

Practice 2 Real-World Problems: Two-Step Problems

Solve. Draw bar models to help you.

1.   The mass of a grapefruit is 1,200 grams.
A watermelon is 850 grams heavier than the grapefruit.

   a.   What is the mass of the watermelon?
   b.   What is the total mass of the two fruits?

   Give your answer in kilograms and grams.

2.   Box A has a mass of 35 kilograms.
Box B is twice as heavy as Box A.
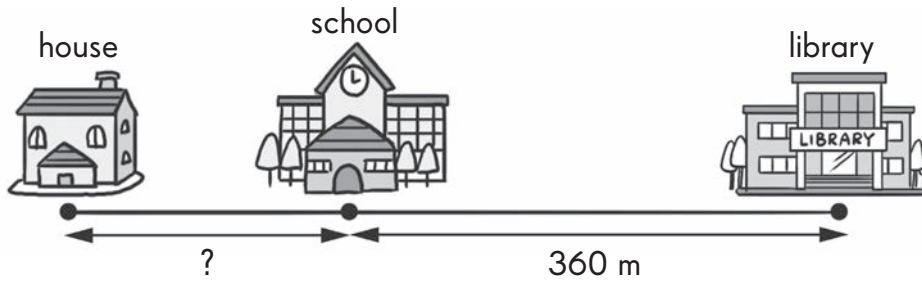Box C is 12 kilograms lighter than Box B.

   a.   What is the mass of Box B?
   b.   What is the mass of Box C?

3. Jill has 3,110 milliliters of water left after filling 3 mugs.
Each mug contains 330 milliliters of water.

   a. How much water is in the 3 mugs?
   b. How much water was there to start with?

Give your answer in liters and milliliters.

4. A ball of yarn is cut into 4 pieces.
Each piece is 65 centimeters long.

   a. How long was the ball of yarn?
   b. How much yarn is left if one piece is given away?

Give your answer in meters and centimeters.

5. Ricardo wants to find the distance from his house to the library.

house   school   library

?   360 m

The distance from his house to the library is 3 times the distance from his house to the school.

a. What is the distance from Ricardo's house to the school?
b. What is the distance between his house and the library?

6. A butcher has a large piece of beef. He cuts and sells 6 portions.
Each has a mass of 10 kilograms. He has 2 kilograms left.
Find the total mass of beef the butcher had at first.

7. There is 141 milliliters of water in a mug.
Rachel spills 45 milliliters of water from the mug.
She then pours the remaining water equally into 4 cups.
How much water is in each cup?

8. Mrs. Vance buys 710 grams of strawberries.
     She has 210 grams of strawberries left after making
     5 glasses of strawberry smoothie.
     How many grams of strawberries does she use for a glass?

9. In a story, a tortoise and a hare take part in a race.
     They have to run up and down the same hill.
     The distance from the foot to the top of the hill is 996 meters.
     The hare takes a nap after running 578 meters.
     How much further must the hare run to complete the race?
     Give your answer in kilometers and meters.

10. Six glasses of water can fill a bottle.
Two bottles of water can fill a pitcher.
The pitcher can hold 600 milliliters of water.
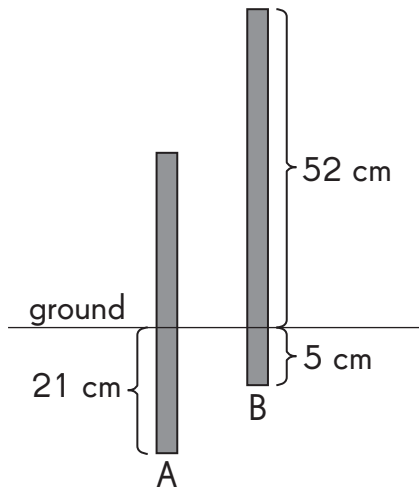How much water can a glass hold?

Put On Your Thinking Cap!

Challenging Practice

Ron puts two sticks into the ground as shown.
Stick B is 10 centimeters longer than Stick A.
What is the length of Stick A that is above the ground?

Put On Your Thinking Cap!

Problem Solving

The mass of a completely filled glass of sand is 200 grams.
When half of the sand is poured out, the total mass of
the glass of sand is 120 grams.
What is the mass of the empty glass?