



1 centimeter (cm)

about the width of a paper clip

*How many cents are in 1 dollar? [100]
How does that help you remember how many centimeters there are in 1 meter?*
[The prefix "centi" means 100, so there are 100 centimeters in 1 meter.]

1 meter (m)

about the width of a door in a house

About how wide will a set of double doors be?
[about 2 meters]

1 kilometer (km)

about the length of 4 city blocks

What would you measure in kilometers? [Distance traveled, length of a marathon]

Prevent Misconceptions
Have students draw a staircase with 4 steps, labeled from bottom to top: mm, cm, m, km. This will help them remember millimeters (on the bottom) are the shortest measure, while kilometers (on top) are the longest.

1 millimeter (mm)

about the thickness of a dime

1 centimeter (cm)

about the width of a paper clip

1 meter (m)

about the width of a door in a house

1 kilometer (km)

about the length of 4 city blocks

Problem Solving

Exercise	Content
14	Linear Measurement
15	Estimate Measurement Communicate Math Understanding
16	Equivalent Fractions ($\frac{6}{8}, \frac{3}{4}$)
17a	Linear Measurement
17b	Linear Measurement
17c	Linear Measurement
17d	Linear Measurement
18	Subtract Fractions ($1 - \frac{1}{4}$) Use Logical Reasoning

Students use underlying processes and mathematical tools for Exercises 14–18. Remind students to check for reasonableness when solving each problem.

Exercise 14

Test-Taking Tip: Gather Information Encourage students to gather information from the pictures. *Which objects are 6 cm or longer?* [The eraser and the calculator]

Exercise 17

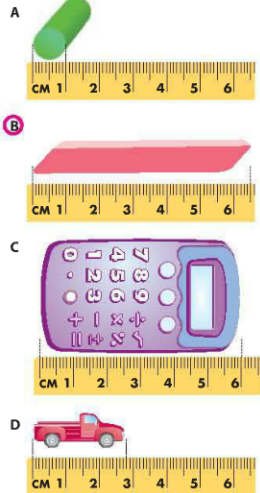
Problem-Solving Strategy: Use Reasoning

Encourage students to check answers for reasonableness. *Which item is the smallest?* [Caterpillar = 40 mm] *The smallest item is measured in millimeters. Now decide which item is the next smallest. That object is probably measured in centimeters.* [Straw = 18 cm] *Which object has the greatest length?* [Distance between two cities = 200 km] *Don't forget that you can use the Visual Learning Bridge to help decide which measurement is the most appropriate for each choice.*

Early Finishers Henry says his ballpoint pen is 17 meters long. Explain whether this statement is reasonable.

Problem Solving

14. Which object is 65 millimeters wide?



15. **Writing to Explain** Darcy is estimating how much fabric she will need to make a new jacket. Is estimating reasonable in this situation? Why or why not?
See margin.

16. Dana ordered 1 medium cheese pizza with 8 slices. She ate 2 pieces. Write 2 equivalent fractions to show the part of the pizza Dana did NOT eat. $\frac{6}{8}, \frac{3}{4}$

17. Choose from the measures listed below to determine the most appropriate lengths.

40 mm 2 m
18 cm 200 km

- The distance between two cities
- The length of a bicycle
- The length of a drinking straw
- The length of a caterpillar

18. **Reasoning** If a measuring cup has $\frac{1}{4}$ cup milk in it, what fraction represents the amount of milk needed to finish filling the cup? $\frac{3}{4}$ cup

Answer

15. Sample answer: Yes; She can estimate when buying an amount, and then find the exact measurements while making the jacket.