

Length Data Detectives

Estimate, measure, and read a picture graph.

GRADE 2 • 2.MDR.5

2.MDR.5 "Estimate and measure the lengths of objects and distance to solve problems found in real-life using standard units of measurement, including inches, feet, and yards and analyze graphical displays of data to answer relevant questions."

NAME _____

DATE _____

PART 1: PRACTICE

Estimate first by thinking about the size of the object. To find a length on a ruler, subtract the start mark from the end mark. Use inches for small objects, feet for bigger spaces, and yards for long distances.

WORKED EXAMPLE

A toy train starts at the 1-inch mark and ends at the 8-inch mark. How long is it?

1. End mark: 8 inches.
2. Start mark: 1 inch.
3. $8 - 1 = 7$.
4. The toy train is 7 inches long.

Answer: 7 inches

PRACTICE 5 problems

- 1** A pencil starts at the 0-inch mark and ends at the 6-inch mark. How long is the pencil?

ANSWER _____

- 2** A button is about ____ long. Choose inches, feet, or yards.

ANSWER _____

- 3** The distance from a classroom door to a bus is about 20 _____. Choose inches, feet, or yards.

ANSWER _____

- 4** The length of a soccer field is about 50 _____. Choose inches, feet, or yards.

ANSWER _____

- 5** A toy snake is 4 inches long. A stuffed lizard is 9 inches long. Which toy is longer?

ANSWER _____

APPLY IT Show your work

- 1** Part 2: Apply The picture graph shows pet tunnel lengths. Dog: ■■ Cat: ■■■■ Rabbit: ■■■■ Each ■ = 2 feet. Which pet has the longest tunnel?

WORK SPACE

ANSWER _____

- 2** At the art table, a paintbrush starts at the 3-inch mark and ends at the 9-inch mark. How long is the paintbrush?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Part 3: Challenge A bike path is 40 yards long. A sidewalk is 40 feet long. Each yard equals 3 feet. Which is longer? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A pencil starts at the 0-inch mark and ends at the 6-inch mark. How long is the pencil?	6 inches
2	A button is about ____ long. Choose inches, feet, or yards.	inches
3	The distance from a classroom door to a bus is about 20 _____. Choose inches, feet, or yards.	feet
4	The length of a soccer field is about 50 _____. Choose inches, feet, or yards.	yards
5	A toy snake is 4 inches long. A stuffed lizard is 9 inches long. Which toy is longer?	The stuffed lizard

PART 2 • APPLY IT

1. **Cat** The cat has four squares. That is more squares than the dog or rabbit.
2. **6 inches** Subtract the start mark from the end mark: $9 - 3 = 6$.

CHALLENGE

The bike path is longer. 40 yards equals 120 feet, and 120 feet is longer than 40 feet.

Accept unit abbreviations such as in., ft., and yd. For the challenge, accept any clear explanation that shows 40 yards equals 120 feet.