LESSON MAKER PRO

# Unit Size Clues

*Measure one object with two different units.*

**GRADE 2 · 2.MD.A.2**

**CCSS.Math.Content.2.MD.A.2** "Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen."

NAME _____ DATE _____

## THE BIG IDEA

Measure the same object with two kinds of units. A longer unit gives a smaller number. A shorter unit gives a bigger number.

## WORKED EXAMPLE

A strip of paper is measured with paper clips and crayons.

1. The strip is 12 paper clips long.
2. The same strip is 3 crayons long.
3. There are fewer crayons, so a crayon is a longer unit.

**Answer: The strip is 12 paper clips long and 3 crayons long. A crayon is longer than a paper clip.**

## PRACTICE 4 problems

**1** A pencil is 10 pennies long and 2 erasers long. Which unit is longer?

**ANSWER** _____

**2** A ribbon is 4 blocks long and 8 buttons long. Which unit is shorter?

**ANSWER** _____

**3** A toy road is 6 craft sticks long and 18 cubes long. Why is the cube number bigger?

**ANSWER** _____

_____

**4** A cat tunnel is 5 spoons long and 15 linking cubes long. Write both measurements. Then tell which unit is longer.

**ANSWER** _____

_____

## APPLY IT Show your work

**1** Zoe measures her doll bed. It is 7 markers long and 14 snap cubes long. Which unit is longer? Explain.

WORK SPACE

**ANSWER** _____

**2** Leo measures a hamster path. It is 9 toy cars long and 27 buttons long. Which unit is shorter? Explain.

WORK SPACE

**ANSWER** _____

**3** Measure the same strip twice. An adult gives you one paper strip, six identical short paper units and three identical long paper units. Line short units end to end along the strip with no gaps or overlaps; count and record the measurement. Remove them and measure the SAME strip with the long units. Record both counts and explain why the counts differ. Show both measurements to the adult.

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

A game board is 4 blocks long and 16 cubes long. Sam says cubes are longer because 16 is bigger. Is Sam right? Explain.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Unit Size Clues

**GRADE 2 · 2.MD.A.2**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | A pencil is 10 pennies long and 2 erasers long. Which unit is longer? | **erasers** |
| 2 | A ribbon is 4 blocks long and 8 buttons long. Which unit is shorter? | **buttons** |
| 3 | A toy road is 6 craft sticks long and 18 cubes long. Why is the cube number bigger? | **Cubes are shorter units than craft sticks.** |
| 4 | A cat tunnel is 5 spoons long and 15 linking cubes long. Write both measurements. Then tell which unit is longer. | **5 spoons long and 15 linking cubes long. A spoon is longer than a linking cube.** |

## PART 2 · APPLY IT

1. **Markers are longer. It takes fewer markers than snap cubes to measure the doll bed.** Compare the two measurements of the same doll bed. The smaller number, 7, uses the longer unit.
2. **Buttons are shorter. It takes more buttons than toy cars to measure the hamster path.** Compare the two measurements of the same path. The bigger number, 27, uses the shorter unit.
3. **6 short units and 3 long units. The longer unit needs fewer copies to cover the same strip.** Prepare a 12 cm strip, six 2 cm-long units and three 4 cm-long units before class. Keep all unit widths consistent and label the two kinds short/long. Observe each actual end-to-end measurement and endpoint alignment. The long unit is twice as long, so half as many cover the strip: $6 \times 2 = 3 \times 4 = 12$ cm.

## CHALLENGE

**No. Cubes are shorter because it takes more cubes to measure the same game board. Blocks are longer.**

Accept answers that clearly state that fewer units means a longer unit and more units means a shorter unit. Accept singular or plural unit names when the meaning is clear. Apply 3 requires two actual measurements of the same prepared strip and the unit-size explanation. Help place units if needed while the learner counts and explains.