Measure It Again

Change the unit, change the count.

2.GM.2.1 "Explain the relationship between the size of the unit of measurement and the number of units needed to measure the length of an object."

NAME _____ DATE _____

MORE UNITS

When you use smaller units to measure the same length, you need more of them.

A hallway takes 6 long strides. Short strides would take more strides.

FEWER UNITS

When you use bigger units to measure the same length, you need fewer of them.

A garden path takes 18 small pebbles laid end to end. Bigger pebbles would take fewer pebbles.

1 SORT

8 items

For each object, circle MORE or FEWER for the new number of units, then choose two items, one from each group, and explain how you know.

1.	Measure a scarf with long sticks, then with shorter sticks.	MORE FEWER
2.	Measure a desk with 1-inch blocks, then with 2-inch blocks.	MORE FEWER
3.	Measure a jump rope with small strips, then with strips twice as long.	MORE FEWER
4.	Measure a ribbon with 4-inch strips, then with 2-inch strips.	MORE FEWER
5.	Measure a shelf with big paper clips, then with small paper clips.	MORE FEWER
6.	Measure a shoelace with short pieces of string, then with pieces twice as long.	MORE FEWER
7.	Measure a flagpole's shadow with long steps, then with short steps.	MORE FEWER
8.	Measure a wall with large tiles, then with tiles half as long.	MORE FEWER

2 PROVE IT

Explain your thinking

Choose two items, one from each group, and explain how you know.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new example that needs MORE units and one that needs FEWER units when the unit size changes.

MORE _____

FEWER _____

CHALLENGE

A rope takes 8 units when each unit is 3 inches long. How many units will it take if each unit is 6 inches long? Explain why.

ANSWER KEY

Measure It Again

GRADE 2 · 2.GM.2.1

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Measure a scarf with long sticks, then with shorter sticks.	**MORE**	Shorter sticks require more units for the same scarf.
2	Measure a desk with 1-inch blocks, then with 2-inch blocks.	**FEWER**	The new blocks are longer, so fewer are needed.
3	Measure a jump rope with small strips, then with strips twice as long.	**FEWER**	Strips twice as long require fewer units.
4	Measure a ribbon with 4-inch strips, then with 2-inch strips.	**MORE**	The new strips are half as long, so more are needed.
5	Measure a shelf with big paper clips, then with small paper clips.	**MORE**	Smaller paper clips require more units.
6	Measure a shoelace with short pieces of string, then with pieces twice as long.	**FEWER**	Pieces twice as long require fewer units.
7	Measure a flagpole's shadow with long steps, then with short steps.	**MORE**	Shorter steps require more units.
8	Measure a wall with large tiles, then with tiles half as long.	**MORE**	Tiles half as long require more units.

PART 2 · PROVE IT

Task: Choose two items, one from each group, and explain how you know.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **MORE**: Measure a blanket with long strips, then with shorter strips.
- **FEWER**: Measure a rug with small blocks, then with bigger blocks.

Challenge: It will take 4 units. Each new unit is twice as long, so the rope needs half as many units.

For Part 2, look for one MORE item and one FEWER item. Each explanation should connect the change in unit size to the opposite change in the number of units.