Length Match

Compare lengths in millimeters, centimeters, and meters.

4.GM.2.6 "Recognize and use the relationship between millimeters, centimeters, and meters to measure and compare objects."

NAME _____ DATE _____

SAME LENGTH

Use 10 mm = 1 cm and 100 cm = 1 m to change units. If the lengths match after you change units, they are the same length.

A 7 cm ribbon and a 70 mm shoelace

DIFFERENT LENGTHS

Change the lengths to the same unit. If the numbers do not match, the lengths are different.

A 5 m fence and a 420 cm path

1 SORT

8 items

For each numbered pair, circle SAME or DIFFERENT.

1.	A 40 cm desk edge and a 400 mm shelf edge	SAME DIFFERENT
2.	A 12 cm pencil and a 130 mm crayon	SAME DIFFERENT
3.	A 4 m garden hose and a 350 cm skipping rope	SAME DIFFERENT
4.	A 2 m curtain and a 200 cm rug	SAME DIFFERENT
5.	A 15 cm bookmark and a 150 mm paper strip	SAME DIFFERENT
6.	An 8 cm toy car and a 90 mm toy train	SAME DIFFERENT
7.	A 3 m hallway and a 3,000 mm corridor	SAME DIFFERENT
8.	A 20 cm paintbrush and a 200 mm spoon	SAME DIFFERENT

2 PROVE IT

Explain your thinking

Pick two sort items and explain how you know where each belongs.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new pair of lengths for SAME and one new pair for DIFFERENT.

SAME

DIFFERENT

CHALLENGE

Write 1 m 25 cm in centimeters and in millimeters, and show how you know.

ANSWER KEY # Length Match

GRADE 4 · 4.GM.2.6

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	A 40 cm desk edge and a 400 mm shelf edge	**SAME**	40 cm = 400 mm.
2	A 12 cm pencil and a 130 mm crayon	**DIFFERENT**	12 cm = 120 mm, not 130 mm.
3	A 4 m garden hose and a 350 cm skipping rope	**DIFFERENT**	4 m = 400 cm, not 350 cm.
4	A 2 m curtain and a 200 cm rug	**SAME**	2 m = 200 cm.
5	A 15 cm bookmark and a 150 mm paper strip	**SAME**	15 cm = 150 mm.
6	An 8 cm toy car and a 90 mm toy train	**DIFFERENT**	8 cm = 80 mm, not 90 mm.
7	A 3 m hallway and a 3,000 mm corridor	**SAME**	3 m = 3,000 mm.
8	A 20 cm paintbrush and a 200 mm spoon	**SAME**	20 cm = 200 mm.

PART 2 · PROVE IT

Task: Pick two sort items and explain how you know where each belongs.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **SAME**: A 25 cm notebook and a 250 mm folder
- **DIFFERENT**: A 2 m bench and a 180 cm table

Challenge: 1 m 25 cm = 125 cm because 1 m = 100 cm. Since 125 × 10 = 1,250, it is also 1,250 mm.

For Part 2, accept explanations that correctly convert the two lengths to one unit before comparing them.
For Part 3, check that each new pair fits its category.