

Ruler Mark Detectives

Find lengths using inch, half-inch, and quarter-inch marks.

GRADE 3 • 3.MDR.5.4

3.MDR.5.4 "Use rulers to measure lengths in halves and fourths (quarters) of an inch and a whole inch."

NAME _____

DATE _____

MEASURE BETWEEN MARKS

To find a length, look at the ruler mark where an object starts and where it ends. If the object does not start at 0, subtract the start mark from the end mark.

WORKED EXAMPLE

A craft stick starts at the $1\frac{1}{2}$ -inch mark and ends at the $4\frac{3}{4}$ -inch mark. How long is it?

1. End mark: $4\frac{3}{4}$ inches.
2. Start mark: $1\frac{1}{2}$ inches.
3. Subtract: $4\frac{3}{4} - 1\frac{1}{2} = 3\frac{1}{4}$.

Answer: $3\frac{1}{4}$ inches

PRACTICE 6 problems

- 1** A crayon starts at 0 and ends at the 2-inch mark. How long is the crayon?

ANSWER _____

- 2** A toy train starts at 0 and ends at the $3\frac{1}{2}$ -inch mark. How long is the toy train?

ANSWER _____

- 3** A leaf starts at 0 and ends at the $4\frac{1}{4}$ -inch mark. How long is the leaf?

ANSWER _____

- 4** A paper strip starts at the $\frac{1}{4}$ -inch mark and ends at the $2\frac{1}{2}$ -inch mark. How long is the strip?

ANSWER _____

- 5** A paintbrush starts at the $\frac{3}{4}$ -inch mark and ends at the $3\frac{3}{4}$ -inch mark. How long is the paintbrush?

ANSWER _____

- 6** A key starts at the $2\frac{1}{2}$ -inch mark and ends at the 5-inch mark. How long is the key?

ANSWER _____

APPLY IT Show your work

- 1** Jada is measuring a sticker for her skateboard. The sticker starts at the $\frac{1}{2}$ -inch mark on a ruler and ends at the $3\frac{1}{2}$ -inch mark. How long is the sticker?

WORK SPACE

ANSWER _____

- 2** Noah is cutting a cord for a friendship bracelet. The cord starts at the $1\frac{1}{4}$ -inch mark and ends at the $5\frac{1}{2}$ -inch mark on a ruler. How long is the cord?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A paper airplane wing is $2\frac{3}{4}$ inches long. Its left end is lined up with the $\frac{1}{2}$ -inch mark on a ruler. Which ruler mark will its right end reach? Explain how you know.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A crayon starts at 0 and ends at the 2-inch mark. How long is the crayon?	2 inches
2	A toy train starts at 0 and ends at the 3 1/2-inch mark. How long is the toy train?	3 1/2 inches
3	A leaf starts at 0 and ends at the 4 1/4-inch mark. How long is the leaf?	4 1/4 inches
4	A paper strip starts at the 1/4-inch mark and ends at the 2 1/2-inch mark. How long is the strip?	2 1/4 inches
5	A paintbrush starts at the 3/4-inch mark and ends at the 3 3/4-inch mark. How long is the paintbrush?	3 inches
6	A key starts at the 2 1/2-inch mark and ends at the 5-inch mark. How long is the key?	2 1/2 inches

PART 2 • APPLY IT

1. **3 inches** Subtract the start mark from the end mark. $3\frac{1}{2} - 1\frac{1}{2} = 3$.
2. **4 1/4 inches** Subtract $1\frac{1}{4}$ from $5\frac{1}{2}$. The difference is $4\frac{1}{4}$.

CHALLENGE

The right end reaches the 3 1/4-inch mark. $\frac{1}{2} + 2\frac{3}{4} = 3\frac{1}{4}$.

Accept equivalent fraction forms, such as $2\frac{2}{4}$ for $2\frac{1}{2}$, when the measurement is correct. Whole-inch answers may be written with or without the word inches.