

Grade 2 - Measuring Length - Lesson

Common Core 2.MD.A.1, 2.MD.A.2, 2.MD.A.3, 2.MD.A.4, 2.MD.B.5, 2.MD.B.6 · maths-pdf.fr/en/

This **length lesson** for 2nd Grade covers measuring length (Common Core 2.MD.A.1, 2.MD.A.2, 2.MD.A.3, 2.MD.A.4, 2.MD.B.5, 2.MD.B.6), with a free PDF to print.

To measure length, line up one end of the object with the 0 mark on a ruler, then read the number at the other end and say the unit. Pick inches or feet for short things and centimeters or meters when you use the metric system. Add lengths to join them, and subtract to compare them.

Grade 2 · Common Core State Standards: **2.MD.A.1, 2.MD.A.2, 2.MD.A.3, 2.MD.A.4, 2.MD.B.5, 2.MD.B.6**

Key facts in this length lesson

Key facts

- Start at the 0 mark, keep the object straight, and read the number at the other end.
- A smaller unit gives a larger number: the same strip is 2 feet or 24 inches.
- Always write the unit, such as 5 in, 12 cm, or 21 ft.
- Subtract two lengths to find how much longer one object is.
- On a number line diagram, a jump right adds and a jump left subtracts.

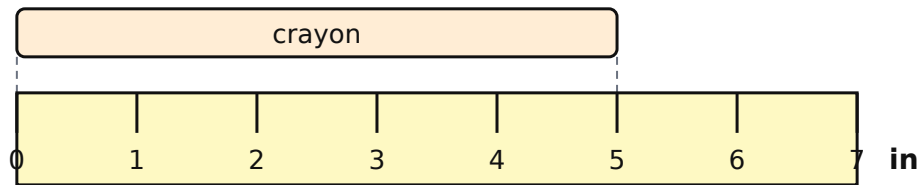
How do you measure length with a ruler?

Length tells how long something is from one end to the other. We measure it with a ruler, and the answer needs a number and a unit.

Length and unit

Length is the distance from one end of an object to the other. A **unit** is the size we count with, such as an inch, a foot, a yard, a centimeter, or a meter.

1. Line up one end of the object with the 0 mark.
2. Keep the object straight along the ruler.
3. Read the number at the other end.
4. Write the number and the unit.



The left end of the crayon sits at 0. The right end is at 5, so the crayon is 5 inches long.

Which tool and unit should you choose?

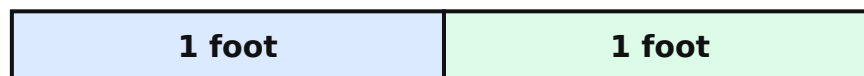
Pick a tool that fits the size of the object. A short object needs a small unit. A long object needs a bigger one.

Tool	Unit	Good for measuring
6-inch or 12-inch ruler	inches (in)	a crayon, a book
yardstick	feet (ft) and yards (yd)	a desk, a hallway wall
centimeter ruler	centimeters (cm)	a paper clip, a ribbon
meter stick	meters (m)	a door, a playground

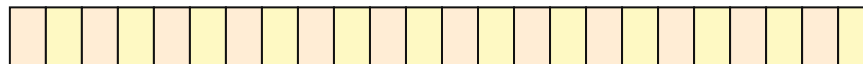
Why does the same object get two different numbers?

A foot is a long unit and an inch is a short one. When you measure with a short unit, you need more of them. When you measure with a long unit, you need fewer.

The same strip



measured in feet: 2



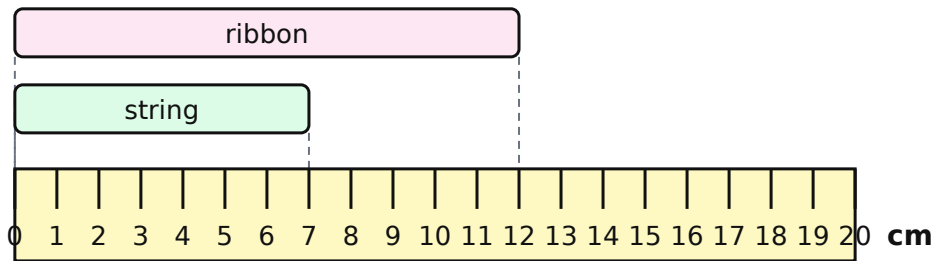
measured in inches: 24

A smaller unit fits more times, so the count is larger: 2 feet is 24 inches.

Before you measure, you can make an **estimate**. A good trick is to think of something you know, like a paper clip that is about 1 inch wide, and imagine how many would fit.

How do you compare lengths and solve length problems?

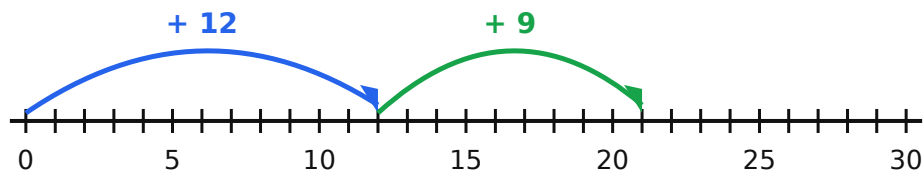
Measure both objects with the same unit. Then subtract to find how much longer one is.



The ribbon is 12 cm and the string is 7 cm. The ribbon is $12 - 7 = 5$ cm longer.

Number line diagram

A **number line diagram** has equal spaces and starts at 0. Each jump stands for a length. Jumps to the right add, and jumps to the left subtract.



Two jumps on a number line: $12 + 9 = 21$ feet.

Worked example. A path is 12 feet long. Maya adds a part that is 9 feet long. How long is the whole path? Add the two lengths: $12 + 9 = 21$. The path is 21 feet long.

Length lesson: questions and answers

What is the difference between an inch and a centimeter?

Both measure length, but a centimeter is a smaller unit. One inch is about two and a half centimeters, so the same object has a bigger number in centimeters.

What if an object does not start at 0 on the ruler?

Count the equal spaces between the two ends, not the number at the end. For example, an object from 3 to 9 is 6 units long, because $9 - 3 = 6$.

Which tool should I use for a long object?

Choose a yardstick or a meter stick for long things such as a wall or a hallway. A short ruler would need many moves and could cause mistakes.

How can I estimate a length?

Think about an object whose length you know, like a paper clip or your hand. Imagine how many of them would fit end to end, then count that many.

How do I use a number line to solve a length problem?

Draw a line that starts at 0 and make one jump for each length. Jump right to add and left to subtract. The last landing spot is the answer.

How to use this length lesson

Read the definitions first, then follow the worked method line by line and redo the example on paper without looking. When every step makes sense, move on to the worksheet, then check yourself with the quiz.

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