

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 · mathovore.fr

Length is how long an object is from one end to the other. To measure it, line up one end of the object with the 0 mark on a ruler, yardstick, or meter stick, then read the number at the other end. Always write the unit, such as inches, feet, centimeters, or meters.

Grade 2 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

Key facts:

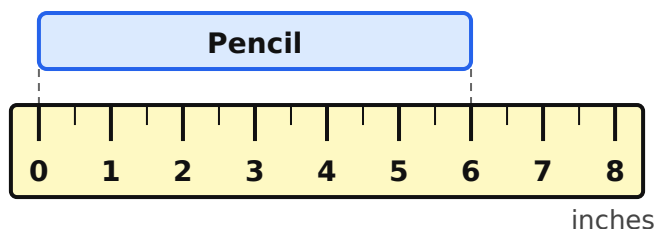
- Line up one end of the object with 0 on the ruler.
- A longer unit, like a foot, gives a smaller number than a shorter unit, like an inch.
- To compare two lengths, measure with the same unit and subtract.
- Number line jumps to the right add lengths. Jumps to the left subtract lengths.
- Write the unit in every answer: in, ft, cm, or m.

What is length?

Length tells how long something is, from one end to the other end. A pencil, a hallway, and a jump rope all have a length. To find a length, we line up the object with a measuring tool and count the units.

How do you measure with a ruler?

Put the 0 mark of the ruler at one end of the object. Then look at the other end. The number it touches tells the length. Always check that the object sits right on the edge of the ruler.



The left end of the pencil lines up with 0. The right end lines up with 6, so the pencil is 6 inches long.

Measuring tools

An **inch ruler** measures short things like a pencil. A **yardstick** and a **meter stick** measure longer things like a table. A **measuring tape** measures very long things like a hallway.

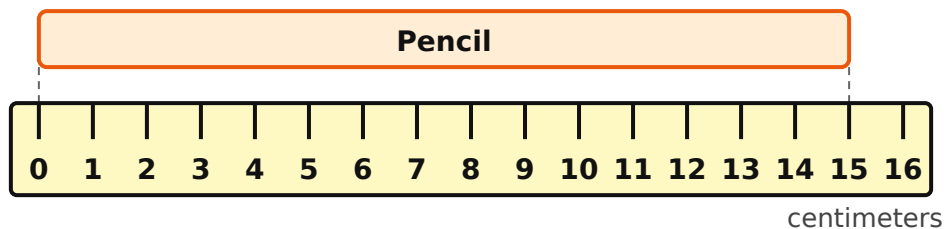
Which unit should you use?

Pick a unit that fits the object. Use small units for small objects and big units for big objects.

Unit	Short name	Good for measuring
inch	in	a crayon, a key
foot	ft	a desk, a door
centimeter	cm	an eraser, a leaf
meter	m	a classroom wall, a bus

Why does the number change when the unit changes?

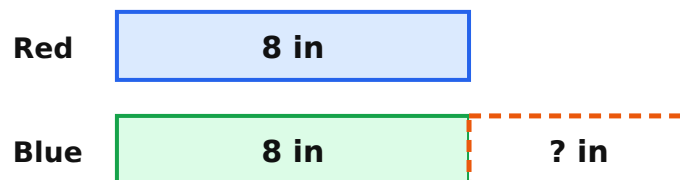
Measure the same object twice with two different units. A foot is longer than an inch, so a table needs fewer feet than inches. A centimeter is shorter than an inch, so the same pencil needs more centimeters than inches. Longer unit, smaller number. Shorter unit, bigger number.



The same pencil on a centimeter ruler is about 15 centimeters long. Smaller units give a bigger number.

How do you compare two lengths?

Measure both objects with the same unit. Then subtract the shorter length from the longer length to find the difference. Blue ribbon is 13 inches and red ribbon is 8 inches, so $13 - 8 = 5$. Blue is 5 inches longer.



The blue ribbon is 13 inches long. The red ribbon is 8 inches long. The dashed part shows how much longer blue is.

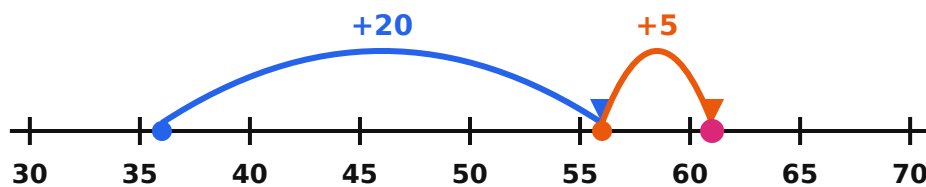
How do you add and subtract lengths on a number line?

A number line shows lengths as jumps. To add, jump to the right. To subtract, jump to the left. Break a big jump into easy jumps of tens and ones.

Solve a length story

1. Read the story and find the numbers and the unit.
2. Decide: put lengths together (add) or find how much longer (subtract).
3. Draw jumps on a number line or write an equation with a ? for the missing number.
4. Solve, then write the answer with its unit.

Example. Maya has 36 feet of rope. Jamal has 25 feet of rope. How many feet do they have together? Start at 36. Jump 20 to 56. Jump 5 more to 61. $36+25=61$. They have **61 feet**.



Start at 36. Jump 20 to reach 56. Jump 5 more to reach 61. So $36 + 25 = 61$.

Measuring Length: frequently asked questions

How do you read a ruler?

Put the 0 mark at one end of the object. Find the mark that touches the other end. That number is the length, so remember to say the unit.

What is the difference between inches and centimeters?

Both measure length, but a centimeter is shorter than an inch. The same pencil is about 6 inches long or about 15 centimeters long.

Why do I get a smaller number when I measure in feet?

A foot is a longer unit. It takes fewer long units than short units to cover the same length.

How do you find how much longer one object is?

Measure both objects with the same unit. Subtract the shorter length from the longer length.

The answer is the difference.

How can a number line help with length stories?

Jumps show the lengths. Jump right to add and left to subtract, and break big jumps into tens and ones.