

Dear parent or guardian: This is a summary of the key ideas your child is learning in mathematics. You can use this summary as background as you support your child's work. Some suggestions for simple activities you can do with your child are also included.

1 Measuring Lengths

Using Units to Measure Length, Height, and Distance

We can say that an object is “long” or that it is “short.” If we want to be more specific than that, we can describe length using units.

By using units, we can decide which of two objects is longer (or wider) without even having the objects available. We can do this only if we use the same unit or units with relationships we know to measure both objects.

The length of an object is the number of copies of a unit that it takes to go from one end of the object to the other.

This book is 6 toothpicks long.



This shoe is 5 erasers long.

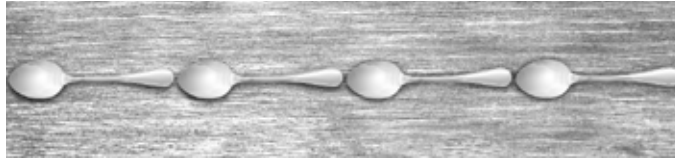


Toothpicks and erasers are known as non-standard units since they may not all be the same length; toothpicks from one box may be longer than toothpicks from another box. (Centimetres and metres are known as standard units, since every centimetre is exactly the same length. Students will learn about standard units later.)

Using Units to Measure Length, Height, and Distance
(continued)

The width of an object is the number of copies of a unit that it takes to go from one side to the other.

This board is 4 spoons long.



Distance is the number of copies of a unit that can fit between two points.

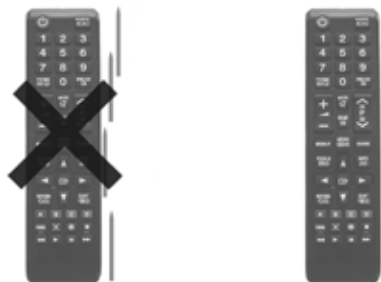
The distance between one side of the road and the other is 14 steps.



Measuring Carefully

When measuring length, it is important to start at one end and go all the way to the other end.

It is also important to use the same unit over and over in a straight line with no gaps and no overlaps.



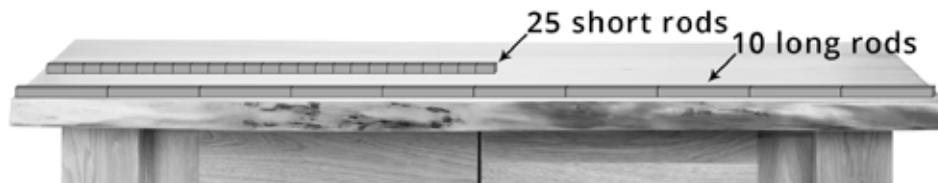
What Non-Standard Units Make Sense

To measure length, it makes sense to use units that are long and thin, for example:

- toothpicks
 - linking-cube trains
 - finger widths
 - footprints
 - handspans
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The Effect of Unit Choice

If a small unit is used, it takes a lot more of that unit to measure something than it does if a large unit is used.



Helping Your Child

There are many opportunities to measure lengths using non-standard units at home.

For example:

- You can measure how many steps it takes to cross a room.
- You can measure how far 10 spoons is.
- You can measure how many shoes you can line up beside a bed.
- You can compare how long a line of 10 nickels is to how long a line of 10 dimes is.

Use words related to measurement with your child whenever you can. Hearing and using words such as “long,” “short,” “tall,” and “wide” can help children consolidate their understanding of those concepts.

Notes

While the length of an object refers to the distance from one end to the other, the word “length” is often used to refer to any distance. So, a length of 8 units could be the distance across an object or the distance from one object to another.

Students need to have a good idea of what length means before they can understand how a ruler works. For example, before students are introduced to rulers, they need to understand that if an object has a length of 8 units, it takes 8 of something to be as long as the object. In Grade 1, students build a solid understanding of length by working with non-standard units before they are introduced to standard units.

Students will be introduced to the standard unit centimetres and to centimetre rulers in Grade 2.

Definitions

distance: the number of copies of a unit that fit between two points

length of an object: the distance from one end of an object to the opposite end; the number of units it takes to go from one end of an object to the other

non-standard unit: a unit that can vary in length, e.g., a pencil or a footprint

standard unit: a unit with an agreed-upon size, e.g., a metre or a centimetre

unit: an item that is iterated (repeated over and over) so that the length of another object can be compared to it

width of an object: the distance from one side of an object to the opposite side; the number of units it takes to go from one side of an object to the other