Estimation and benchmarks for length

Annotation

Jordan can use a mental image of her fingernail as a reference or benchmark for 1 centimetre and uses this image to support her estimation of the length of a line that is 8 centimetres long. As she draws the line, she mentally pictures repetitions of her fingernail placed along it. She is able to measure the line she has drawn with precision. She takes care when aligning the 0 on the ruler with the start of her line, and she is able to determine that the line is 9.3 centimetres long. She is able to convert centimetres to millimetres.

Problem: Estimation and benchmarks for length

The teacher asks the student:

How long is 1 centimetre?

Student Response

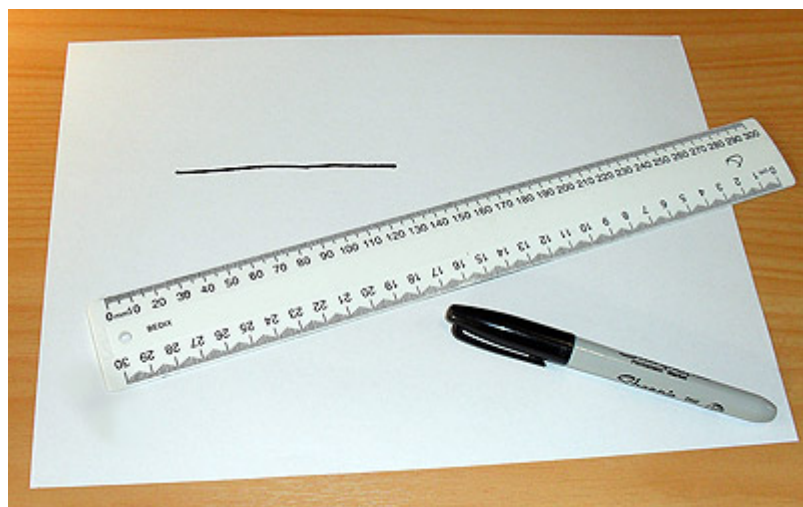Jordan shows how long using a distance between her thumb and forefinger.

 Teacher: Do you have a particular object that you think of when you think of a 1-centimetre length?
 Jordan: My fingernail.
 Teacher: Without using a ruler, can you draw me a line that is 8 centimetres long?

Jordan draws a line.

 Teacher: Use this ruler to measure your line. How long is it?

 Jordan: It is 9.3 centimetres
 Teacher: Do you know how many millimetres that is?

Jordan: 93.