

- 1 The puppet put the plastic end (before 0) at the start of a pencil line.
- 2 The far end sat on the 7 mark, so the puppet called out 7 cm.
- 3 But the real line starts at the 0 mark, not the plastic end.
- 4 The gap before 0 is 1 cm, so the true length is 6 cm.
- 5 Check out loud: 0 at the start, ruler straight, read the end.

1. Read the length of the pencil
2. Read the length of the zip
3. Read the length of the plank

a. The 0 mark must sit at one end of the object before you read its length

b. Starting from the plastic end before the 0 gives the correct length

c. A tilted ruler changes the length reading by a centimetre

d. With 0 at the start and the end on the 14 mark the object is 14 cm long