

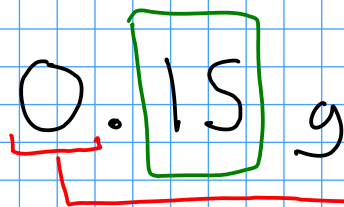
A small problem

The number ZERO has several uses. It may be a measured number, but it may also be a mere "placeholder" that wasn't measured at all!

So how do we tell a measured zero from a placeholder? There are a few ways:

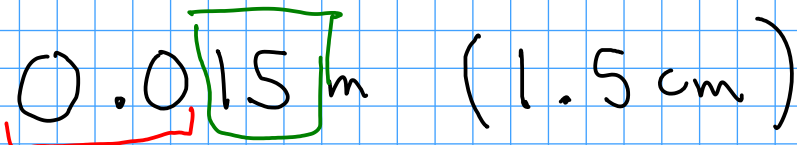
1: BEGINNING ZEROS: Beginning zeros are NEVER considered significant.

0.15 g



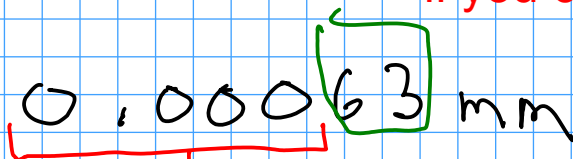
This zero merely indicates that there is a decimal point coming up!

0.015 m (1.5 cm)



These zeros are placeholders. They'll disappear if you change the UNITS of this number!

0,00063 mm



None of these zeros are considered significant

2: END ZEROS are sometimes considered significant. They are significant if

- there is a WRITTEN decimal point in the number
- there is another written indicator that the zero is significant. Usually this is a line drawn over or under the last zero that is significant!

1.50 km ± 0.01

This zero IS considered significant. There's a written decimal.

1500 m ± 100 m

These zeros ARE NOT considered significant (no written decimal, and no other indication that the zeros are significant)

1430̄00 g ± 100 g

These zeros are not significant.

This zero IS significant. It's marked.

How many significant figures are there in each of these measurements?

76.070 g \pm .001 g
5

85000. mm \pm 1 mm
5 \uparrow

0.001030 kg

156.0002 g

0.10 s

17000000 mg

120000 km

1350 ms