Noteset 0D (Part 3) - Accuracy in Measured Values

Accuracy in measured values

Known
Measured directly in lab.

32.618 g ← unit

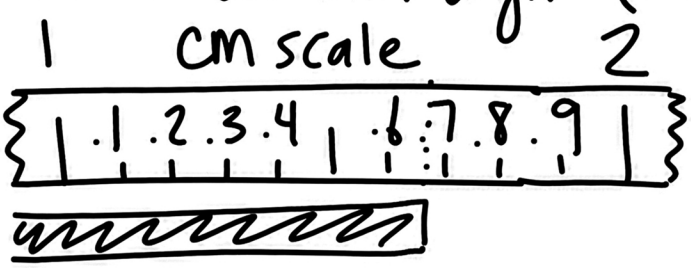
32.618 g — known digits | unknown or estimated digit

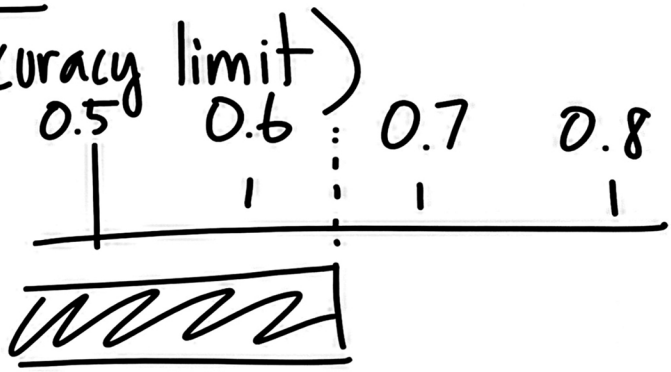
Unknown
Estimated final digit from measure

All measurements have any # known but only 1 unknown digit

Accuracy in measured values

Determine unknown digit (accuracy limit)





Known: 1.6 cm (From Ruler)

Unknown: 0.05 cm (estimated)

Total = 1.65 cm

Accuracy in measured values

Determine accuracy (± value)

Measure	known	unknown	Accuracy (±)
32.16 g	32.1	6	[32.16] ± 00.01 ‖ ±0.01

32.16 g
known Unknown

remove extra zero

Measure	known	unknown	Accuracy (±)
91263 m	9126	3	91263 ± 00001 ± 1

91263 m
known Unknown

no decimal = ±1

Assignment 0F – Accuracy and Precision in Lab

Complete the following questions based on the in class discussion and presentation

Measured Values (Experimental)	Correct Value (Known)	Accuracy (Accurate/Not Accurate)	Precision (Precise/Not Precise)
34.6g, 34.5g, 34.7g, 34.6g	34.6g	accurate	precise
31.5g, 36.2g, 34.7g, 33.2g	34.6g	34.7 accurate Rest not accurate	not precise
23.5g, 23.4g, 23.6g, 23.3g	34.6g	not accurate	precise
12.3g, 100.4g, 150.3g, 1.5g	34.6g	not accurate	not precise