

GENERAL CHEMISTRY

STANDARD 1.6

HOW GOOD IS A MEASUREMENT?

Scientists use two words to describe how good the measurements are

Accuracy- how close the measurement is to the actual value

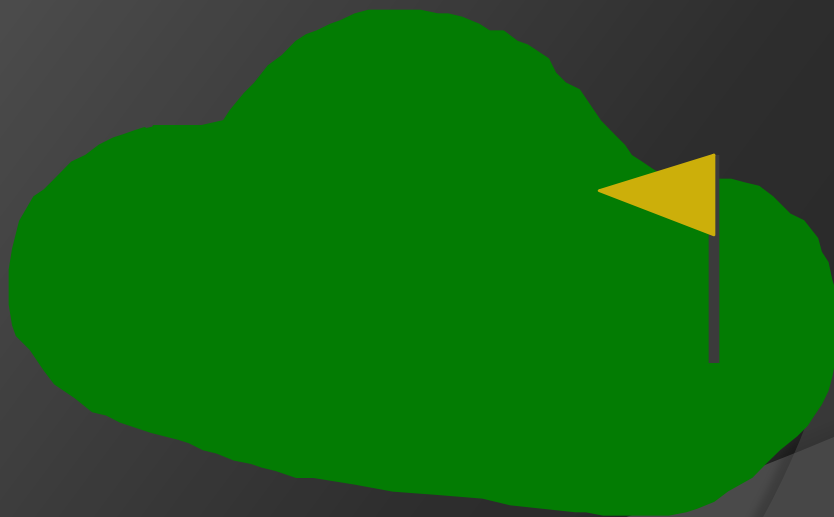
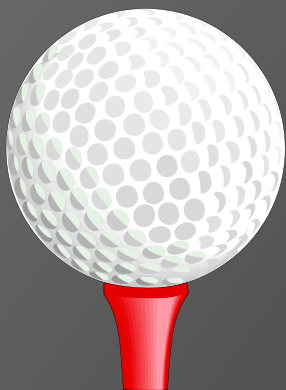
Precision- how well can the measurement be repeated

Accuracy can be true of an individual measurement or the average of several

Precision requires several measurements before anything can be said about it

ACCURACY VS PRECISION

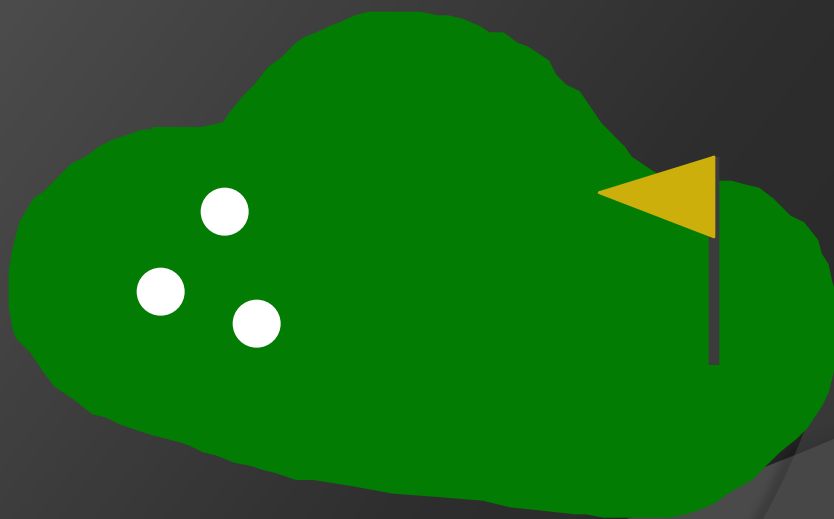
Lets use a golf analogy



ACCURACY VS PRECISION

Accurate? No

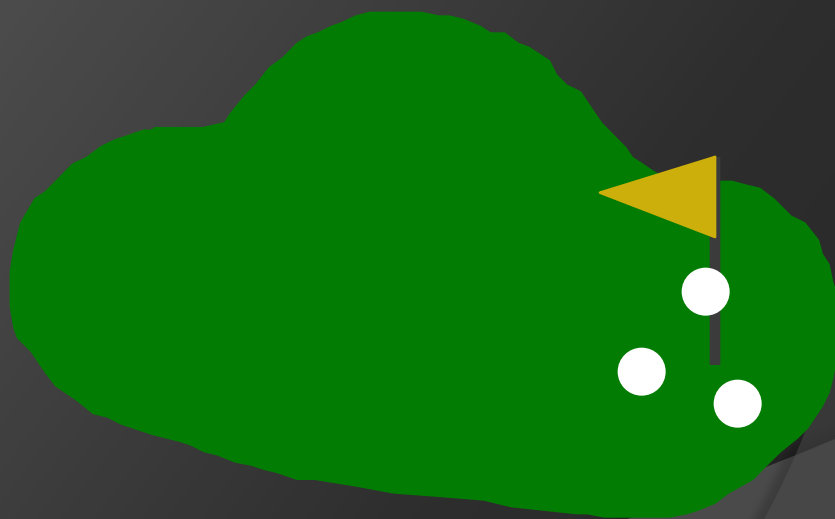
Precise? Yes



ACCURACY VS PRECISION

Accurate? Yes

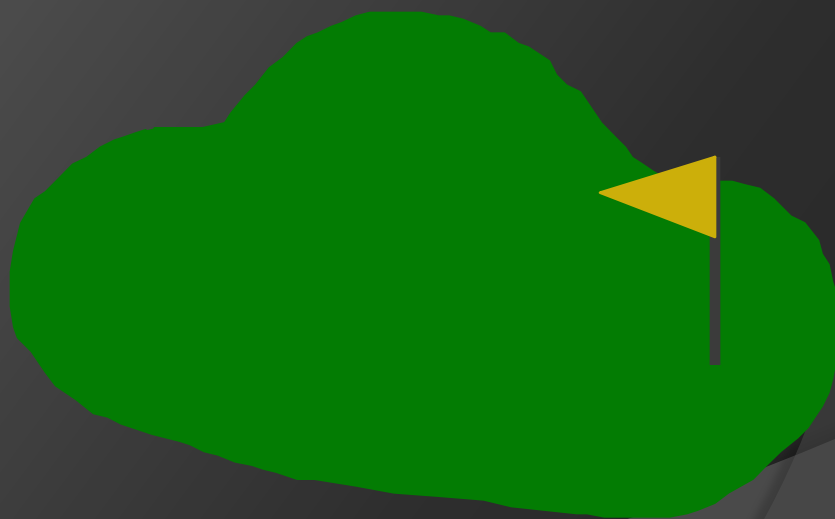
Precise? Yes



ACCURACY VS PRECISION

Accurate? Maybe?

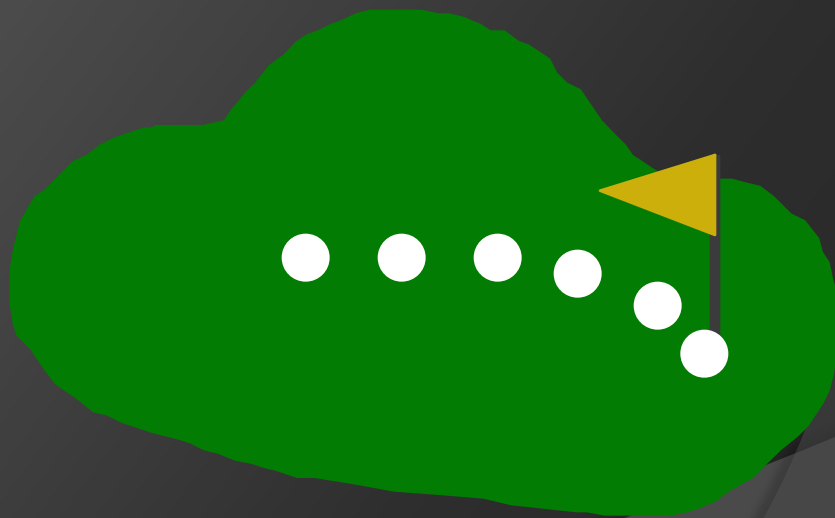
Precise? No



ACCURACY VS PRECISION

Accurate? Yes

Precise? We can't say! Changing over time.



ACCURACY VS PRECISION

Three students measure the room to be 10.2 m, 10.3 m and 10.4 m across.

Were they precise?

Yes

Were they accurate?

We can't say without knowing the actual value