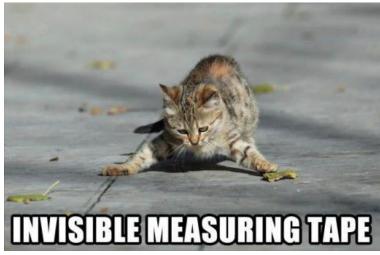
### Measurement







#### Action Movie shooting precision



Every trained Policeman



Main character, who never fired a gun before

# **Precision**

• Getting the same result when measuring something.



### Accuracy

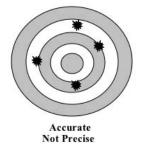
 How close your measurement is to the true measurement.



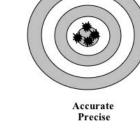
## Examples

- A scale that measures in milligrams but is off by 1 kilogram is precise but not accurate.
- A scale that measures only in kilograms but is correct is accurate but not very precise.









Not Accurate Precise

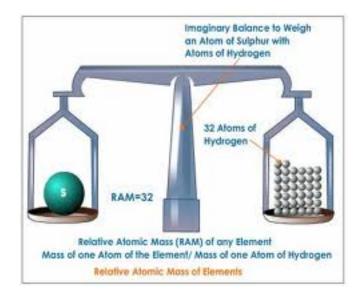
### **Measuring Matter**

- Matter takes up space
- Scientist use the metric system for measuring so they can communicate their ideas without confusion



### Mass

- A measurement of how much matter an object contains.
- Measured using a balance or scale.



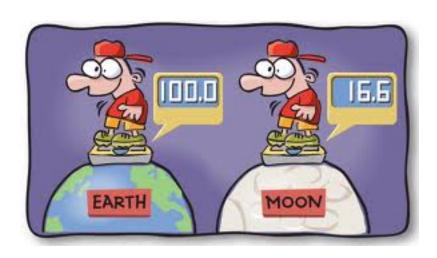
# Weight

A measurement of the pull of gravity on an object.



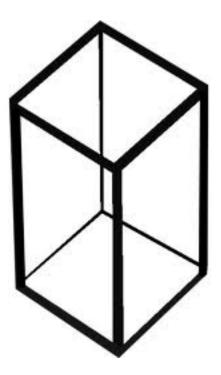
### Mass versus Weight

 An object will have the same mass on the Earth and the moon but different weights because the moon has 1/6<sup>th</sup> the gravity of Earth.



### Volume

- A measure of how much space an object occupies.
- 1 milliliter =  $1 \text{ cm}^3$



### Measuring Volume

- The volume of a regular object can be found by measuring the sides and using a formula
- The volume of an irregular object can be found by using displacement

