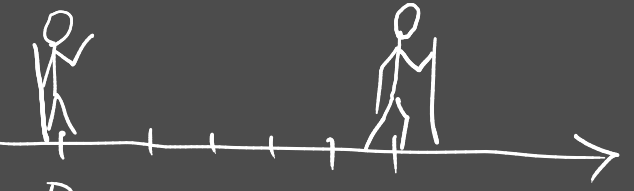
Physics for Society

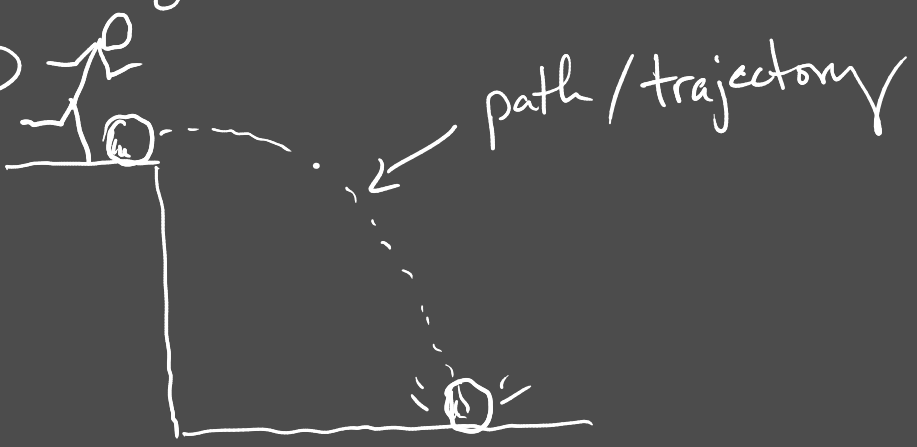
Chapter 1

Measurement

- length → dimension → 1D



→ 2D



  - meters
- time
  - seconds
- mass
  - gram → kilogram

Smallest ⟶ Largest

Milli:	Centi	Deci	Basn	Deca	Hecto	Kilo
1/1000	1/100	1/10	1	10	100	1000
mm	cm		meter			km
mg			gram			kg
ms			second			

So how do we convert from one to another? → Chain method

- 10 meters → centimeters

$$\frac{10 \text{ meter}}{1} \cdot \underbrace{\frac{100 \text{ centimeters}}{1 \text{ meters}}}_{} = \boxed{1000} \text{ centimeters}$$

- 1200 milligrams → kilograms

$$1200 \text{ mg} \cdot \frac{1 \text{ g}}{1000 \text{ mg}} \cdot \frac{1 \text{ kg}}{1000 \text{ g}} = \boxed{.0012} \text{ kg}$$

Scientific Notation

↳ to make big or small numbers easy to compare

187001250. or 815620000.01

1.87001250×10^{8}

$8.15620000{\color{white}0}1 \times 10^{7}$

Significant Figures

62.1 cm

62.100325 cm ← length

30.1 ← width