# UNITS (IS – INTERNATIONAL SYSTEM)

## TIME

$$1s = \frac{1}{60}\min = \frac{1}{3600}h = \frac{1}{3600\cdot 24}day = \frac{1}{3600\cdot 24\cdot 365}year$$

$$1year = 365 \text{ days} = 365\cdot 24h = 365\cdot 24\cdot 60\min = 365\cdot 24\cdot 3600s$$

## MASS

1 Kg = 1000 g = 1000000 mg = 1000000000 µg

## LENGTH:

1 km = 1000 m $\Leftrightarrow$ 1m = $10^{-3}$km
1m = 100 cm $\Leftrightarrow$ 1cm = $10^{-2}$ m
1m = 1000 mm $\Leftrightarrow$ 1 mm = $10^{-3}$m
1m = 1.000000 µm $\Leftrightarrow$ 1 µm = $10^{-6}$ m
1m = 1.000000000 nm $\Leftrightarrow$ 1nm = $10^{-9}$ m
1m = 1000000000000 pm $\Leftrightarrow$ 1pm = $10^{-12}$m

## AREA:

$1m^2$ = 100 cm $\cdot$ 100 cm = 10000 $cm^2$
$1cm^2$ = 0,01m $\cdot$ 0,01m = 0.0001 $m^2$
$1mm^2$ = 0,001m $\cdot$ 0,001m = 0,000001 $m^2$

## VOLUME:

$1\ m^3 = 100cm \cdot 100\ cm \cdot 100cm = 1000000cm^3 = 10^6 cm^3$

$1\ cm^3 = 0.01m \cdot 0.01m \cdot 0.01\ m = 0.000001\ m^3 = 10^{-6}\ m^3$

$1\ litro = 1000\ cm^3 = 10^{-3}\ m^3$

## DENSITY $D = mass/Volume$

$1\ g/cm^3 = 10^3\ kg/m^3$

Why?

$1 \quad \cdot \quad 10^6 \quad \cdot \quad 10^{-3} \quad = 10^3$

$$\frac{g}{cm^3} \qquad \frac{cm^3}{m^3} \qquad \frac{kg}{g} \qquad \frac{kg}{m^3}$$