

### Radian

Number of radians=arc length/radius of same circle

$$q = S/r$$

If one revolution is  $360^\circ$ , radians will be circumference/radius. This will give us  $2\pi r/r$  and therefore  $2\pi rad=360$  and finally,  $1 rad=57.3^\circ$  (after dividing)

This also proves that  $1 rad$  in one revolution= $2\pi$

### Steradian

Number of steradians in sphere= area of sphere/ $r^2$ . Thus, steradians in sphere= $4\pi$

### Prefixes

Prefix	Decimal Multiplier	Symbol
yotta	$10^{24}$	Y
zetta	$10^{21}$	Z
Exa	$10^{18}$	E
Peta	$10^{15}$	P
Tera	$10^{12}$	T
giga	$10^9$	G
Mega	$10^6$	M
kilo	$10^3$	k
hecto	$10^2$	h
deca	$10^1$	da
deci	$10^{-1}$	d
centi	$10^{-2}$	c
milli	$10^{-3}$	m
micro	$10^{-6}$	$\mu$
nano	$10^{-9}$	n
pico	$10^{-12}$	p
femto	$10^{-15}$	f
atto	$10^{-18}$	a
zepto	$10^{-21}$	z
yocto	$10^{-24}$	y

### Uncertainties

#### Sum and Difference

The normal values always follow the given operation however, the uncertainties **ALWAYS** get added

#### Product and Quotient

The normal values always follow the given operation however, the uncertainties are first **converted into %**, **added** and finally **converted back** (only if needed)

#### Power

The normal value gets solved as normal however, the uncertainty is **converted into %**, **multiplied to the given power** and finally **converted back** (only if needed)

### Significant Figures

#### Addition and Subtraction

Krd

#### Multiplication and Division

Oks