|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **α** | **sin α** | **cos α** | **tg α** | **ctg α** |
| **0°** | 0 | 0 | 1 | 0 | / |
| **30°** | π/6 | ½ |  |  |  |
| **45°** | π/4 |  |  | 1 | 1 |
| **60°** | π/3 |  | ½ |  |  |
| **90°** | π/2 | 1 | 0 | / | 0 |
| **180°** | π | 0 | -1 | 0 | / |
| **270°** | 3π/2 | -1 | 0 | / | 0 |
| **360°** | 2π | 0 | 1 | 0 | / |

sin α + sin β = 2sin α+β/2 cos α-β/2

cos α + cos β = 2cos α+β/2 cos α-β/2

cos α - cos β = -2sin α+β/2 sin α-β/2

sin α cos β = ½(sin(α+β)+sin(α-β))

cos α cos β = ½ (cos(α+β)+cos(α-β))

sin α sin β = ½(cos(α+β)-cos(α-β))

y=Asin(ωx+ρ)

A - amplituda

ω - krožna frekvenca

osn. perioda: 2**π/ω**

**p\*sinx+q\*cosx=A\*sin(x+**α)

**sin(π+**α)=-sinα

**cos(π+**α)=-cosα

**sin(π-**α)=sinα

**cos(π-**α)=-cosα

tg(α+β)=tgα+tgβ / 1-tgα tgβ

tg(x/2) = ± 

sinx=a x=arcsina +2kπ

x=π-arcsina + 2kπ

cosx=a x=arccosa + 2kπ

x=-arccosa + 2kπ

tgx=a x=arctga + kπ

ctgx=a x=arcctga + kπ

cos (α ± β) = cosα cosβsinα sinβ

sin (α ± β) = sinα cosβ ± cosα sinβ

sin (π/2 - α) = cosα

cos (π/2 - α) = sinα

cos 2α = cos2α - sin2α

sin 2α = 2sinαcosα

cos α/2 = ± 

sin α/2 = ± 

+ = ←

- = →

tgα = sinα/cosα

ctgα = cosα/sinα

1+tg2α= 1/cos2α

1+ctg2α=1/sin2α

ctgα = tg(π/2-α)

tgα=ctg(π/2-α)

ctgx=tg-1

cosα=±

x=r\*cosα r=

y=r\*sinα α=arctgy/x + kπ