|  |  |
| --- | --- |
| Cos(x1-x2)=cosx1cosx2+sinx1sinx2Cos(x1+x2)=cosx1cosx2–sinx1sinx2Sin(x1+x2)=sinx1cosx2+cosx1sinx2Sin(x1-x2)=sinx1cosx2-cosx1sinx2 Tg(x1+x2)=tgx1+tgx2 **/** 1-tgx1tgx2Tg(x1-x2)=tgx1-tgx2 **/** 1+tgx1tgx2Ctg(x1+x2)=ctgx1ctgx2-1 **/** ctgx1+ctgx2Ctg(x1-x2)=ctgx1ctgx2+1 **/** ctgx1-ctgx2 | Sin2x=2sinxcosxCos2x=cos2x-sin2xTg2x=2tgx / 1-tg2xCtg2x=ctg2x-1 / 2ctgxSin3x=3sinx-4sin3xCos3x=4cos3x-3cosxTg3x=3tgx-tg3x/1-3tg2xCtg3x=ctg3x-3ctgx/3ctg2x-1 |
| Sinx1+sinx2=2sinx1+x2***/*2** cosx1-x2***/*2**Sina\*sinb=1***/*2**(sin(a+b)+sin(a-b))Sinx1-sinx2=2cosx1+x2***/*2** sinx1-x2***/*2**Cosx1+cosx2=2cosx1+x2***/*2** cosx1-x2***/*2**Cosa\*cosb=1***/*2**(cos(a+b)+cos(a-b))Cosx1-cosx2=-2sinx1+x2***/*2** sinx1-x2***/*2**Sina\*sinb=-1/**2**(cos(a+b)-cos(a-b))Tgx1+tgx2=sin(x1+x2)***/***cosx1cosx2Ctgx1+ctgx2=sin(x2+x1)***/***sinx1sinx2 |

|  |
| --- |
| Sinx=2sinx***/***2 cosx***/***2Cosx=cos2x***/***2-sin2x***/***21=sin2x***/***2+cos2x***/***2 |