$$90: \pi/2$$

sin (90°+A) = Cos A	sin (90°-A) = cos A
cos (90°+A) = - Sin A	cos (90° -A) = Sin A
tan (90+A) = - Cot A	tan (90°-A) = Cot A

Sin (180-A) = Sin A   sin(360+A) = sin A

Cos (180-A)= -cos A   cos(360+A)= cosA

tan (180-A)= - tan A   Change   tan(360+A) = tanA

180 : 2π   No Change   0

sin (180+A) = - sin A   sin (270+A) = - cos A   sin(360-A) = -SinA

cos (180+A)= - cos A   cos (270+A) = sin A   Cos(360-A) =cosA

tan (180+A) = tan A   tan (270+A) = - cotA   tan(360-A) =tan A

$$270 : \pi/2$$

Angle in degree Signs as per Quadrant Sign change Sin ⟷ cos near 90&270 else no change

(i)   sin (A ± B) = sin A cos B ± cos A sin B

(ii)   cos (A ± B) = cos A cos B ± sin A sin B

(iii)   tan (A ± B) = $\dfrac{tanA \pm \tan B}{1 \mp tanA.tanB}$

(iv)   cot (A± B) = $\dfrac{CotA.CotB \mp 1}{cotA \pm \cot B}$

(v)   sin 2A = 2 sin A cos A = $\dfrac{2tanA}{1+\tan^2 A}$

(vi)   cos 2A = $\cos^2 A - \sin^2 A = 1 - 2\sin^2 A = 2\cos^2 A - 1 = \dfrac{1-\tan^2 A}{1+\tan^2 A}$

(vii)   tan2A= $\dfrac{2tanA}{1-\tan^2 A}$, Cot 2A = $\dfrac{\cot^2 A-1}{2CotA}$

(viii) Half Angles Sin $\dfrac{A}{2}$ = $\pm \sqrt{\dfrac{1-CosA}{2}}$ Cos $\dfrac{x}{2}$ = $\pm \sqrt{\dfrac{1+CosA}{2}}$

(ix)   tan$\dfrac{A}{2}$ = $\sqrt{\dfrac{1-cosA}{1+cosA}}$ = $\dfrac{SinA}{1+cosA}$ = $\dfrac{1-cosA}{sinA}$

(x)   sin 3A = $3\sin A - 4\sin^3 A$

(xi)   cos 3A = $4\cos^3 A - 3\cos A$

(xii)   tan 3A = $\dfrac{3tanA-\tan^3 A}{1-\tan^2 A}$

(xiii) 2sinACosB = Sin(A+B)+sin(A-B)   2cosAsinB =sin(A+B) –sin(A-B)

        2cosAcosB=cos(A+B)+cos(A-B)   2sinAsinB = cos(A-B) –cos(A+B)

(xiv)   sin C+ sin D =2sin$\dfrac{C+D}{2}$cos$\dfrac{C-D}{2}$ sin C – sin D =2cos$\dfrac{C+D}{2}$ sin$\dfrac{C-D}{2}$

        cos C+ Cos D= 2cos$\dfrac{C+D}{2}$ cos$\dfrac{C-D}{2}$ cos C- cos D = - 2sin$\dfrac{C+D}{2}$sin$\dfrac{C-D}{2}$

(xv)   If A+B =180 then sin A=sin B , cos A = -cos B ,   tan A= -tan B

(xvi)   If A+B =360 then sin A=-sin B , cos A =   cos B   , tan A= -tan B

(xvii) Sinx=Siny ⇨ x= nπ+ (-1)^n y, cos x= cos y ⇨ x=2nπ±y and if tanx=tany ⇨x=nπ±y, n€ Z