の落美3.

$$t_{anx} = \frac{sinx}{cosx} = \frac{secx}{cscx}$$

$$secx = \frac{t_{anx}}{sinx} = \frac{escx}{cotx}$$

$$cscx = \frac{secx}{tanx} = \frac{cotx}{cosx}$$

$$cotx = \frac{cosx}{sinx} = \frac{cscx}{secx}$$

$$cvsx = \frac{sinx}{tanx} = \frac{cotx}{cscx}$$

$$sinx = \frac{tanx}{secx} = \frac{cosx}{cotx}$$

(3) 经数益条

sinx ·csc X=1 CUS T. Sec Y=1 tanx. cot X=1

(3) 年方年2条务。

$$sin^{2}X + cos^{2}X = 1$$

$$tan^{2}X + 1 = sec^{2}X$$

$$1 + cot^{2}X = csc^{2}X$$

sin(atno) 专家混落 ca (以上) 远看那 tan (xIn2) 以多成说漏

$$sin(\alpha + \frac{\lambda}{2}) = cosd$$
 $sin(\alpha + \lambda) = -sin\alpha$
 $cos(\alpha + \frac{\lambda}{2}) = -sin\alpha$. $cos(\alpha + \lambda) = -cos\alpha$
 $tan(\alpha + \frac{\lambda}{2}) = -cot\alpha$ $tan(\alpha + \lambda) = +tan\alpha$

COS(Q+B) = COSQ cosp - sindsing

$$Sin(\alpha + \beta) = sin \alpha cos \beta + cos \alpha sin \beta$$

$$tan(\alpha + \beta) = \frac{tan\alpha + tan\beta}{1 - tand tan\beta}$$

①教化和差:

福角:

(3)

$$\frac{42.9 \times 42.8}{\text{sindsin}\beta} = \frac{\sin(\alpha+\beta) + \sin(\alpha-\beta)}{2}$$

$$\cos \alpha \sin \beta = \frac{\sin(\alpha+\beta) - \sin(\alpha-\beta)}{2}$$

$$\cos \alpha \cos \beta = \frac{\cos(\alpha+\beta) + \cos(\alpha-\beta)}{2}$$

$$\sin \alpha \sin \beta = \frac{\cos(\alpha+\beta) + \cos(\alpha-\beta)}{2}$$

Sind +sinß = 2 sin & +B COS &-B sina-sing= 2 as ata sind-B cos a + coss = Z as a+B cos a-B COSX - COSB = - Z sin x+B sin x-B

sin (atf) sin(x-f) = sind - ging cos (xf) cos(x-b) = cos2x - sixb - sin (x+p) sin(x-p) = cost - cost

cos(x-f) = cos a onf + sind sinf

 $sin(\alpha-\beta) = sin\alpha con\beta - cosa sin\beta$

 $tan(d-\beta) = \frac{tand - tan\beta}{1 + tand tan\beta}$

$$\sin^2\theta = \frac{1 - \cos 2\theta}{2}$$

$$\cos^2\theta = \frac{1 + \cos 2\theta}{2}$$

$$\sin^2\theta = \frac{1 - \cos 4\theta}{2}$$

$$\frac{1}{2} \hat{\theta} :$$

$$s in 2\theta = 2sin\theta \cos \theta = \frac{2 \tan \theta}{1 + \tan^2 \theta}$$

$$\cos 2\theta = \cos^2 \theta - \sin^2 \theta = 2\cos^2 \theta - 1 = 1 - 2\sin^2 \theta = \frac{1 - \tan^2 \theta}{1 + \tan^2 \theta}$$

$$\tan 2\theta = \frac{2 \tan \theta}{1 - \tan^2 \theta}$$

$$\int \dot{x} = \frac{1}{2}$$

$$\sin \frac{\theta}{2} = \pm \sqrt{\frac{1 - \cos \theta}{2}}$$

$$\cos \frac{\theta}{2} = \pm \sqrt{\frac{1 + \cos \theta}{2}}$$

$$\tan \frac{\theta}{2} = \pm \sqrt{\frac{1 - \cos \theta}{1 + \cos \theta}} = \frac{\sin \theta}{1 + \cos \theta} = \frac{1 - \cos \theta}{\sin \theta}$$