

$$15. (\sin x + \cos x)^2 = 1 + \sin 2x$$

$$16. \sin 2x = (\tan x)(1 + \cos 2x)$$

$$17. \sin^2 x = \frac{1}{2}(1 - \cos 2x)$$

$$18. \cos^2 x = \frac{1}{2}(\cos 2x + 1)$$

$$19. 1 - \cos 2x = \tan x \sin 2x$$

$$20. 1 + \sin 2t = (\sin t + \cos t)^2$$

$$21. \sin^2 \frac{x}{2} = \frac{1 - \cos x}{2}$$

$$22. \cos^2 \frac{x}{2} = \frac{1 + \cos x}{2}$$

$$23. \cot \frac{\theta}{2} = \frac{\sin \theta}{1 - \cos \theta}$$

$$24. \cot \frac{\theta}{2} = \frac{1 + \cos \theta}{\sin \theta}$$

$$25. \cos 2u = \frac{1 - \tan^2 u}{1 + \tan^2 u}$$

$$26. \frac{\cos 2u}{1 - \sin 2u} = \frac{1 + \tan u}{1 - \tan u}$$

$$27. 2 \csc 2x = \frac{1 + \tan^2 x}{\tan x}$$

$$28. \sec 2x = \frac{\sec^2 x}{2 - \sec^2 x}$$