

$$15. \cos 2\theta = \frac{1 - \tan^2 \theta}{1 + \tan^2 \theta}$$

$$16. \sin 3\theta = 3\sin\theta - 4\sin^3\theta$$

$$17. \cos 3\theta = 4\cos^3\theta - 3\cos\theta$$

$$18. \sin(A+B) = \sin A \cos B + \cos A \sin B$$

$$19. \sin(A-B) = \sin A \cos B - \cos A \sin B$$

$$20. \cos(A+B) = \cos A \cos B - \sin A \sin B$$

$$21. \cos(A-B) = \cos A \cos B + \sin A \sin B.$$

$$22. \sin C + \sin D = 2 \sin \frac{C+D}{2} \cos \frac{C-D}{2}$$

$$23. \sin C - \sin D = 2 \cos \frac{C+D}{2} \sin \frac{C-D}{2}$$

$$24. \cos C + \cos D = 2 \cos \frac{C+D}{2} \cos \frac{C-D}{2}$$

$$25. \cos C - \cos D = -2 \sin \frac{C+D}{2} \sin \frac{C-D}{2}$$

$$26. \tan(A+B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$$

$$\tan(A-B) = \frac{\tan A - \tan B}{1 + \tan A \tan B}$$

$$\cot(A+B) = \frac{\cot A \cot B - 1}{\cot A + \cot B}$$

$$\cot(A-B) = \frac{\cot A \cot B + 1}{\cot A - \cot B}.$$