

$$13. \csc^2 40^\circ - \cot^2 40^\circ = 1$$

$$1 + \cot^2 A = \csc^2 A \\ 1 = \csc^2 A - \cot^2 A$$

$$1. \tan A = \frac{\sin A}{\cos A}$$

$$2. \cot A = \frac{\cos A}{\sin A}$$

$$3. \sin^2 A + \cos^2 A = 1$$

$$4. \tan^2 A + 1 = \sec^2 A$$

$$5. 1 + \cot^2 A = \csc^2 A$$

$$6. \cos A = \frac{1}{\sec A}$$

$$7. \sin A = \frac{1}{\csc A}$$

$$8. \tan A = \frac{1}{\cot A}$$

$$9. \sec A = \frac{1}{\cos A}$$

$$10. \csc A = \frac{1}{\sin A}$$

$$11. \cot A = \frac{1}{\tan A}$$

$$14. \cos 25^\circ \sec 25^\circ$$

$$\cancel{\cos 25^\circ} \left(\frac{1}{\cancel{\cos 25^\circ}} \right)$$

1

$$15. \tan 220^\circ \cdot \cot 40^\circ$$

$$\tan (220^\circ - 180^\circ) \cot 40^\circ$$

$$\tan 40^\circ \cdot \cot 40^\circ$$

$$\cancel{\tan 40^\circ} \left(\frac{1}{\cancel{\tan 40^\circ}} \right)$$

1

$$16. \frac{\cos 50^\circ}{\sin(-310^\circ)} + \cot(-50^\circ)$$

$$\frac{\cos 50^\circ}{\sin(-310^\circ + 360^\circ)} - \cot 50^\circ$$

$$\frac{\cos 50^\circ}{\sin 50^\circ} - \cot 50^\circ$$

$$\cot 50^\circ - \cot 50^\circ$$

0