

Name : \_\_\_\_\_

# TRIGONOMETRIC RATIOS OF ALLIED ANGLES

| $\alpha$                  | <b>Sin <math>\alpha</math></b> | <b>Cos <math>\alpha</math></b> | <b>Tan <math>\alpha</math></b> | <b>Cot <math>\alpha</math></b> | <b>Sec <math>\alpha</math></b> | <b>Cosec <math>\alpha</math></b> |
|---------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|
| $-\theta$                 | $-\sin \theta$                 | $\cos \theta$                  | $-\tan \theta$                 | $-\cot \theta$                 | $\sec \theta$                  | $-\operatorname{cosec} \theta$   |
| $\frac{\pi}{2} - \theta$  | $\cos \theta$                  | $\sin \theta$                  | $\cot \theta$                  | $\tan \theta$                  | $\operatorname{cosec} \theta$  | $\sec \theta$                    |
| $\frac{\pi}{2} + \theta$  | $\cos \theta$                  | $-\sin \theta$                 | $-\cot \theta$                 | $-\tan \theta$                 | $-\operatorname{cosec} \theta$ | $-\sec \theta$                   |
| $\pi - \theta$            | $\sin \theta$                  | $-\cos \theta$                 | $-\tan \theta$                 | $-\cot \theta$                 | $\sec \theta$                  | $\operatorname{cosec} \theta$    |
| $\pi + \theta$            | $-\sin \theta$                 | $-\cos \theta$                 | $\tan \theta$                  | $\cot \theta$                  | $-\operatorname{cosec} \theta$ | $-\sec \theta$                   |
| $\frac{3\pi}{2} - \theta$ | $-\cos \theta$                 | $\sin \theta$                  | $\cot \theta$                  | $\tan \theta$                  | $-\operatorname{cosec} \theta$ | $-\sec \theta$                   |
| $\frac{3\pi}{2} + \theta$ | $-\cos \theta$                 | $-\sin \theta$                 | $-\cot \theta$                 | $-\tan \theta$                 | $\sec \theta$                  | $\operatorname{cosec} \theta$    |
| $2\pi - \theta$           | $-\sin \theta$                 | $\cos \theta$                  | $-\tan \theta$                 | $-\cot \theta$                 | $\sec \theta$                  | $-\operatorname{cosec} \theta$   |
| $2\pi + \theta$           | $\sin \theta$                  | $\cos \theta$                  | $\tan \theta$                  | $\cot \theta$                  | $\sec \theta$                  | $\operatorname{cosec} \theta$    |

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