SRIHARI MATHEMATICS ACADEMY
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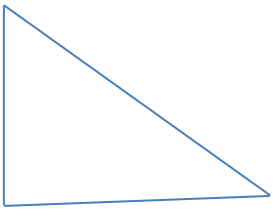
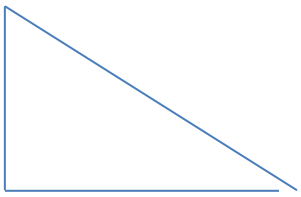
TRIGONOMETRY

1. $\sin\theta = \frac{Oppsite\ side}{Hypotenuse}$
2. $\cos\theta = \frac{Adjacent\ \ side}{Hypotenuse}$
3. $\tan\theta = \frac{Oppsite\ side}{Adjacent\ side} = \frac{\sin\theta}{\cos\theta}$
4. $\cot\theta = \frac{Adjacent\ side}{Oppsite\ side} = \frac{\cos\theta}{\sin\theta}$
5. $\text{cosec}\,\theta = \frac{Hypotenuse}{Oppsite\ \ side} = \frac{1}{\sin\theta}$
6. $\sec\theta = \frac{Hypotenuse}{Adjacent\ side} = \frac{1}{\cos\theta}$
7. $\sin(90° - \theta) = \cos\theta$
8. $\cos(90° - \theta) = \sin\theta$
9. $\tan(90° - \theta) = \cot\theta$
10. $\cot(90° - \theta) = \tan\theta$
11. $\text{cosec}(90° - \theta) = \sec\theta$
12. $\sec(90° - \theta) = \text{cosec}\,\theta$





Trigonometric ratios	0°	30°	45°	60°	90°
$sin\ \theta$	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1

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$cos\,\theta$	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
$tan\,\theta$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	∞
$cot\,\theta$	∞	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0
$sec\,\theta$	1	$\frac{2}{\sqrt{3}}$	$\sqrt{2}$	2	∞
$cosec\,\theta$	∞	2	$\sqrt{2}$	$\frac{2}{\sqrt{3}}$	1

13. $\sin^2\theta + \cos^2\theta = 1$
14. $1 + \tan^2\theta = \sec^2\theta$
15. $1 + cot^2\theta = \text{cosec}^2\theta$