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"CLASS 10th"

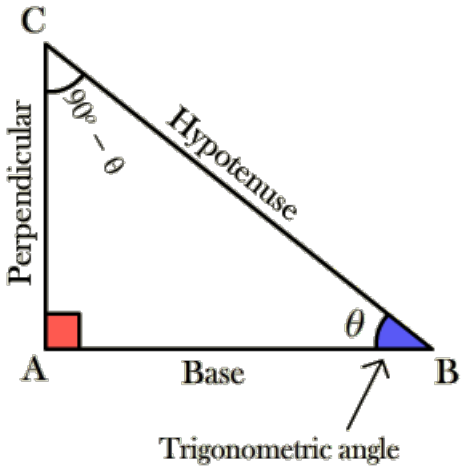
INTRODUCTION TO TRIGONOMETRY

FORMULA/CONCEPT LIST

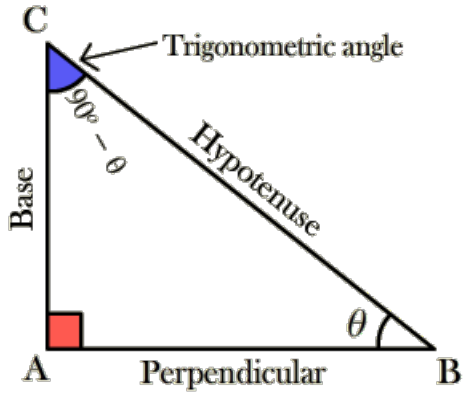
1. Trigonometric Sides

Perpendicular: Side opposite to Trigonometric angle.
Hypotenuse: Side opposite to 90° angle.
Base: Side between Trigonometric angle and 90° angle.

Trigonometric sides as per Trigonometric angle q:
Perpendicular: AC
Hypotenuse: BC
Base: AB



Trigonometric sides as per Trigonometric angle 90° - q:
Perpendicular: AB
Hypotenuse: BC
Base: AC



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2. Trigonometric Ratios

$$\text{Sin}\,\theta = \frac{\text{Perp}}{\text{Hyp}}$$

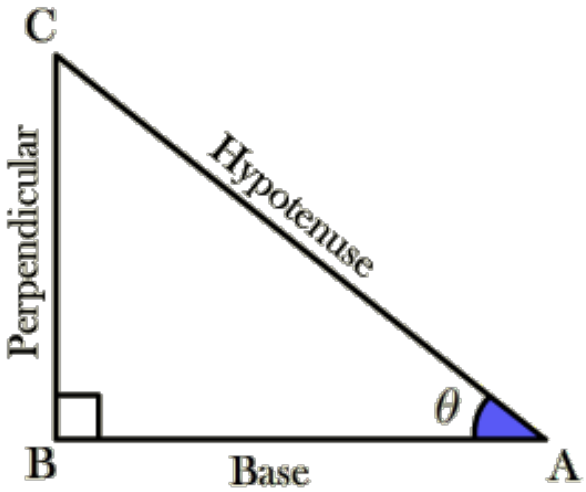
$$\text{Cos}\,\theta = \frac{\text{Base}}{\text{Hyp}}$$

$$\text{Tan}\,\theta = \frac{\text{Perp}}{\text{Base}}$$

$$\text{Cosec}\,\theta = \frac{\text{Hyp}}{\text{Perp}}$$

$$\text{Sec}\,\theta = \frac{\text{Hyp}}{\text{Base}}$$

$$\text{Cot}\,\theta = \frac{\text{Base}}{\text{Perp}}$$



$$\text{Tan}\,\theta = \frac{\text{Sin}\,\theta}{\text{Cos}\,\theta}$$

$$\text{Cosec}\,\theta = \frac{1}{\text{Sin}\,\theta}$$

$$\text{Sec}\,\theta = \frac{1}{\text{Cos}\,\theta}$$

$$\text{Cot}\,\theta = \frac{1}{\text{Tan}\,\theta}$$

(Use blank space to write down your own formula remembering technique)

3. Trigonometric Ratio Table

	0^0	30^0	45^0	60^0	90^0
Sin θ	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
Cos θ	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
Tan θ	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	n.d
Cosec θ	n.d	2	$\sqrt{2}$	$\frac{2}{\sqrt{3}}$	1
Sec θ	1	$\frac{2}{\sqrt{3}}$	$\sqrt{2}$	2	n.d
Cot θ	n.d	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0

(Print out the trigonometric ratio table separately and keep it in front of you)

4. Trigonometric Identities:

$\mathbf{Sin^2\ q + Cos^2\ q = 1}$

$\mathbf{1 + Tan^2\ q = Sec^2\ q}$

$\mathbf{1 + Cot^2\ q = Cosec^2\ q}$

5. Check out complete chapter Introduction to Trigonometry class 10th lecture series on YouTube.

All the lectures are created using animation and visual tools, for better learning experience.

The complete series includes following lectures:

1. Introduction to Trigonometry & Trigonometric Ratios:

   https://youtu.be/6O1EstDc-lM
2. NCERT example Questions Q1 to Q5: https://youtu.be/ylmT2fycF60
3. Exercise 8.1 Q1 to Q6: https://youtu.be/vHz8VwwscVw
4. Exercise 8.1 Q7 to Q11: https://youtu.be/ckodzb7aSmo
5. Trigonometric Ratios of some specific angles: https://youtu.be/u_D_r2ZMaDo
6. NCERT example Questions Q6 to Q8: https://youtu.be/2Wm0yqiJh2U
7. Exercise 8.2: https://youtu.be/LXRkKOfsmqY
8. Trigonometric Identities: https://youtu.be/ykdU4_CzEZI
9. Exercise 8.3 Q1 to Q3: https://youtu.be/FpihQx3fKQw
10. Exercise 8.3 Q4: https://youtu.be/MBrW-V-FQ9M

QUIZ Class 10th Trigonometry:
https://creataclasses.com/class-10th-introduction-to-trigonometry-chapter-8/

EXTRA:

Blank Trigonometric Ratio Table: For practice

	0^0	30^0	45^0	60^0	90^0
$\sin\theta$					
$\cos\theta$					
$\tan\theta$					
$\text{Cosec}\,\theta$					
$\sec\theta$					
$\cot\theta$					

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NOTES:

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