



## MATHS

### TRIGONOMETRIC RATIOS

All Questions

1. Review of some terms



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## 2. Measure of an Angle



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## 3. Trigonometric Ratios



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4. Trigonometric ratios are same for same angle



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## 5. Relation between trigonometric ratios



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## 6. Trigonometric ratios of $0^\circ$ and $90^\circ$



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## 7. Trigonometric ratios for $30^\circ$ and $60^\circ$



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8. Trigonometric ratios for  $45^\circ$



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9. Prove that: 
$$\frac{\cos 30^\circ + \sin 60^\circ}{1 + \cos 60^\circ + \sin 30^\circ} = \frac{\sqrt{3}}{2}$$



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10. Trigonometric value of complementary angle



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11. Evaluate :

$$\tan 5^\circ \tan 25^\circ \tan 30^\circ \tan 65^\circ \tan 85^\circ$$



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12. Find  $\theta$ ; if  $\sin(\theta + 36^\circ) = \cos \theta$ ; where  $\theta + 36$  is an acute angle.



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13. If  $A + B = 90^\circ$ ; prove that

$$\sqrt{\frac{\tan A \tan B + \tan A \cot B}{\sin A \sec B} - \frac{\sin^2 B}{\cos^2 A}} = \tan A$$



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14. In a  $\triangle ABC$ ; right angled at A; If  $AB=5$ ;  $AC=12$  and  $BC=13$ ; find  $\sin B$ ;  $\cos C$  and  $\tan B$



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15. In a  $\triangle ABC$ , right angled at B. If  $\sin A = \frac{3}{5}$ , find  $\cos A$ ,  $\tan A$ ,  $\sec A$  and  $\operatorname{cosec} B$ .



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16. Trigonometric values for some special angle between  $0^\circ$  to  $90^\circ$



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17. Evaluate the following :

$$(i) \frac{\cos 37^\circ}{\sin 53^\circ} \quad (ii) \frac{\sin 41^\circ}{\cos 49^\circ} \quad (iii) \frac{\tan 54^\circ}{\cot 36^\circ}$$



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