

Trigonometry

1. Find (i) $\sin C$ (ii) $\cos C$ and (iii) $\tan C$ in the adjacent triangle.

2. In a triangle XYZ, $\angle Y$ is right angle, $XZ = 17$ m and $YZ = 15$ cm, then find (i) $\sin X$ (ii) $\cos Z$ (iii) $\tan X$

3. In a triangle PQR with right angle at Q, the value of $\angle P$ is x , $PQ = 7$ cm and $QR = 24$ cm, then find $\sin x$ and $\cos x$.

If $\tan A = \frac{3}{4}$, then find the other trigonometric ratio of angle A.

If $\angle A$ and $\angle P$ are acute angles such that $\sin A = \sin P$ then prove that $\angle A = \angle P$

1. In right angle triangle ABC, 8 cm, 15 cm and 17 cm are the lengths of AB, BC and CA respectively. Then, find $\sin A$, $\cos A$ and $\tan A$.

2. The sides of a right angle triangle PQR are $PQ = 7$ cm, $PR = 25$ cm and $\angle Q = 90^\circ$ respectively. Then find, $\tan P - \tan R$.

3. In a right angle triangle ABC with right angle at B, in which $a = 24$ units, $b = 25$ units and $\angle BAC = q$. Then, find $\cos q$ and $\tan q$.

4. If $\cos A = \frac{12}{13}$, then find $\sin A$ and $\tan A$ ($A < 90^\circ$).

5. If $3 \tan A = 4$, then find $\sin A$ and $\cos A$.

6. In $\triangle ABC$ and $\triangle XYZ$, if $\angle A$ and $\angle X$ are acute angles such that $\cos A = \cos X$ then show that $\angle A = \angle X$.

Find the values of $\operatorname{cosec} 60^\circ$, $\sec 60^\circ$ and $\cot 60^\circ$.

Find the values of $\sin 30^\circ$, $\cos 30^\circ$, $\tan 30^\circ$, $\operatorname{cosec} 30^\circ$, $\sec 30^\circ$ and $\cot 30^\circ$ by using the ratio concepts.

Find the values for $\tan 90^\circ$, $\operatorname{cosec} 90^\circ$, $\sec 90^\circ$ and $\cot 90^\circ$.

In $\triangle ABC$, right angle is at B, $AB = 5$ cm and $\angle ACB = 30^\circ$. Determine the lengths of the sides BC and AC.

In $\triangle PQR$, right angle is at Q, $PQ = 3$ cm and $PR = 6$ cm. Determine $\angle QPR$ and $\angle PRQ$.