



- 1 . If in $\triangle ABC$, $\angle B=90^\circ$, $AB=12$ cm and $BC= 5$ cm, then the value of $\cot C$ is
(a) $13/5$ (b) $5/12$ (c) $12/5$ (d) $5/13$
2. Find $9 \sec^2 A - 9 \tan^2 A =$
(a) 1 (b) 9 (c) 8 (d) 0
3. Given $15 \cot A = 8$, find $\sec A$.
(a) $1/4$ (b) $9/4$ (c) $17/8$ (d) $25/8$
4. If $\cos (40^\circ + x) = \sin 30^\circ$, find the value of x .
(a) 20° (b) 40° (c) 25° (d) 50°
5. If $\tan (A + B) = \sqrt{3}$ and $\tan (A-B) = 1/\sqrt{3}$, find A and B .
(a) $15^\circ, 30^\circ$ (b) $45^\circ, 15^\circ$ (c) $30^\circ, 45^\circ$ (d) $30^\circ, 30^\circ$
- 6 The value of $\frac{\cot 45^\circ}{\sin 30^\circ + \cos 60^\circ}$ is equal to :
- 7 If $x \cdot \tan 45^\circ \cdot \cot 60^\circ = \sin 30^\circ \cdot \operatorname{cosec} 60^\circ$, then the value of x is :
- 8 In $\triangle ABC$, if $AB = 6\sqrt{3}$ cm, $AC = 12$ cm and $BC = 6$ cm, then angle B is equal to :
- 9 If $\sec \theta = x + \frac{1}{4x}$ then prove that $\sec \theta + \tan \theta = 2x$ or $\frac{1}{2x}$.
- 10 If $\sec \theta + \tan \theta = p$, show that $\frac{p^2 - 1}{p^2 + 1} = \sin \theta$.
- 11 If $\tan \theta + \sin \theta = m$ and $\tan \theta - \sin \theta = n$, prove that $m^2 - n^2 = 4\sqrt{mn}$.
- 12 If $\sin \theta + \cos \theta = p$ and $\sec \theta + \operatorname{cosec} \theta = q$, show that $q(p^2 - 1) = 2p$
