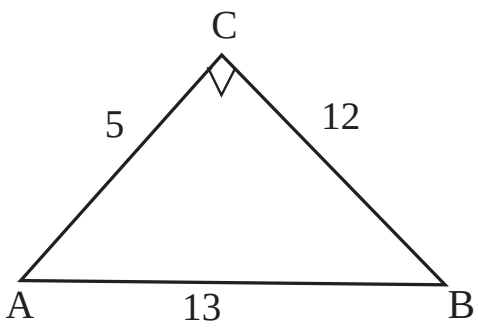
11. TRIGONOMETRY

1. In the following figure, the value of cot A is ____



2. If in ΔABC, $\angle B = 90^0$, AB = 12 cm and BC= 5cm then the value of cosc is ____

3. If $\cot\theta = \frac{b}{a}$ then the value of

$\frac{\cos\theta + \sin\theta}{\cos\theta - \sin\theta}$ is _____

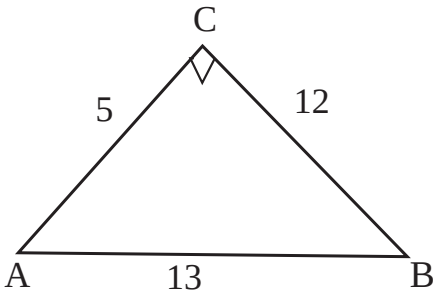
4. The maximum value of $\sin\theta$ is ____
5. If A is an acute angle of a ΔABC, right angled at B, then the value of sin A+cos A is ____

6. The value of $\frac{2\tan 30^0}{1+\tan^2 30^0}$ is _____
7. If $\sin\theta = 1/2$, then the value of $(\tan\theta + \cot\theta)^2$ is ____
8. If $\sin\theta - \cos\theta = 0$ then the value of $\sin^4\theta + \cos^4\theta$ is ____
9. If $\theta = 45^0$ then the value of

$\frac{1-\cos 2\theta}{\sin 2\theta}$ is _____

10. If $\tan\theta = \cot\theta$, then the value of $\text{Sec}\theta$ is ____
11. If $A+B = 90^0$, cotB = 3/4, then tan A is equal to _____
12. If $\sin(x-20^0) = \cos(3x-10)^0$. Then x is ____
13. The value of $1+\tan 5^0 \cot 85^0$ is equal to___

14. If any triangle ABC, the value of sin $\frac{B+C}{2}$ _____
15. If $\cos\theta = a/b$, then $\operatorname{cosec}\theta$ is equal to _____
16. The value of $\cos 20^0 \cos 70^0 - \sin 20^0 \sin 70^0$ is equal to _____
17. The value of $\tan 5^0 \tan 25^0 \tan 45^0 \tan 65^0 \tan 85^0$ is _____
18. If $\tan\theta + \cot\theta = 5$ then the value of $\tan^2\theta + \cot^2\theta$ is _____
19. If $\operatorname{cosec}\theta = 2$ and $\cot\theta = \sqrt{3}p$ where θ is an acute angle, then the value of P is _____
20. $\sqrt{\frac{1+\sin A}{1-\sin A}}$ is equal to _____
21. If $\operatorname{cosec}\theta - \cot\theta = 1/4$ then the value of $\operatorname{cosec}\theta + \cot\theta$ is _____
22. $\sin 45^0 + \cos 45^0$ = _____
23. $2\tan^2 45^0 + \cos^2 30^0 - \sin^2 60^0$ = _____
24. $\sin(90^0 - A)$ = _____
25. If sinA=cosB then, the value of A +B =
26. If $\sec\theta = \frac{m+n}{2\sqrt{mn}}$ then $\sin\theta$ =
27. In the figure, the value of secA is _____



28. If $\sin 2A = 1/2$, $\tan^2 45^0$, where A is an acute angle then the value of A is _____
29. The maximum value of $1/\sec\theta$, $0^0 < \theta < 90^0$ is _____
30. $\frac{\sin^2\theta}{1-\cos^2\theta}$ is equal to _____

31. If $\cot\theta=1$ then $\frac{1+\sin\theta}{\cos\theta}$ = _____
32. $\text{Sec}^2\theta-1$ = ____
33. If $\sec\theta + \tan\theta = p$, then the value of $\sec\theta - \tan\theta$ = _____
34. The value of sinA or cosA never exceeds _____
35. sec $(90^0 - A)$ = _____

ANSWERS

1) 5/12; 2) 5/13; 3) b+a/b–a; 4) 1;
5) greater than one; 6) sin 60^0; 7) 16/3;
8) 1/2; 9) 1; 10) $\sqrt{2}$; 11) 3/4 ; 12) 30^0;
13) $\text{sec}^2 5^0$; 14) cosA/2; 15) $\sqrt{b^2 - a^2}$ / b ;
16) 1; 17) 1; 18) 23; 19) 1; 20) secA + tanA; 21) 4; 22) $\sqrt{2}$; 23) 2;
24) cos A;
25) 90^0; 26) m–n/m+n ; 27) 13/5;
28) 15^0; 29) 1; 30) 1; 31) $\sqrt{2}$ + 1;
32) $\tan^2\theta$; 33)1/p; 34) 1; 35) cosecA.