EduSahara™ Assignment

Name : Trigonometric Expression Evaluation

Chapter : Introduction to Trigonometry

Grade : CBSE Grade X

1. $\sin 45° \cot 30° + \cot 90° \operatorname{cosec} 90° =$

   (i) $\frac{1}{2}\sqrt{3}$ (ii) 3 (iii) $\frac{1}{2}\sqrt{6}$ (iv) $\frac{1}{2}\sqrt[4]{6}$ (v) $\frac{1}{2}\sqrt{8}$

2. $\frac{\sec 60° \cos 60° + \sin 0° \operatorname{cosec} 30°}{\sec 0° \operatorname{cosec} 30° \sin 45° - \operatorname{cosec} 60° \cot 45° \operatorname{cosec} 90°} =$

   (i) $(\frac{3}{2}\sqrt{2}+3)$ (ii) $(\frac{3}{2}\sqrt{5}+\sqrt{3})$ (iii) $(\frac{3}{2}\sqrt{-1}+\sqrt{3})$ (iv) $(\frac{3}{2}\sqrt{2}+\sqrt[4]{3})$ (v) $(\frac{3}{2}\sqrt{2}+\sqrt{3})$

3. $\frac{\sin 39°}{\cos 51°} =$

   (i) 1 (ii) 0 (iii) $\tan 51°$ (iv) -1 (v) $\tan 39°$

4. $\frac{\cos 41°}{\sin 49°} =$

   (i) $\tan 49°$ (ii) -1 (iii) 0 (iv) 1 (v) $\tan 41°$

5. $\frac{\tan 81°}{\cot 9°} =$

   (i) $\tan 9°$ (ii) 1 (iii) -1 (iv) 0 (v) $\tan 81°$

6. $\frac{\cot 77°}{\tan 13°} =$

   (i) -1 (ii) 1 (iii) 0 (iv) $\tan 13°$ (v) $\tan 77°$

7. $\frac{\sec 36°}{\operatorname{cosec} 54°} =$

   (i) 1 (ii) 0 (iii) $\tan 54°$ (iv) $\tan 36°$ (v) -1

8. $\frac{\operatorname{cosec} 87°}{\sec 3°} =$

   (i) 0 (ii) -1 (iii) $\tan 3°$ (iv) $\tan 87°$ (v) 1

9. $\frac{\sin 52° \cos 71°}{\cos 38° \sin 19°} =$

   (i) $\tan 71°$ (ii) 1 (iii) $\tan 52°$ (iv) -1 (v) 0

10. $\frac{\cos 13° \sin 11°}{\sin 77° \cos 79°} =$

    (i) 0 (ii) $\tan 11°$ (iii) $\tan 13°$ (iv) -1 (v) 1

11. $\frac{\tan 2^\circ \cot 18^\circ}{\cot 88^\circ \tan 72^\circ} =$

(i) -1 (ii) 0 (iii) 1 (iv) $\tan 18^\circ$ (v) $\tan 2^\circ$

12. $\frac{\cot 53^\circ \tan 80^\circ}{\tan 37^\circ \cot 10^\circ} =$

(i) 0 (ii) $\tan 53^\circ$ (iii) -1 (iv) $\tan 80^\circ$ (v) 1

13. $\frac{\sec 79^\circ \operatorname{cosec} 61^\circ}{\operatorname{cosec} 11^\circ \sec 29^\circ} =$

(i) $\tan 61^\circ$ (ii) $\tan 79^\circ$ (iii) -1 (iv) 1 (v) 0

14. $\frac{\operatorname{cosec} 83^\circ \sec 73^\circ}{\sec 7^\circ \operatorname{cosec} 17^\circ} =$

(i) $\tan 83^\circ$ (ii) 0 (iii) -1 (iv) $\tan 73^\circ$ (v) 1

15. $\sin 69^\circ - \cos 21^\circ =$

(i) 1 (ii) $2\sin 21^\circ$ (iii) -1 (iv) $2\sin 69^\circ$ (v) 0

16. $\cos 60^\circ - \sin 30^\circ =$

(i) $2\sin 60^\circ$ (ii) -1 (iii) 1 (iv) 0 (v) $2\sin 30^\circ$

17. $\tan 14^\circ - \cot 76^\circ =$

(i) 1 (ii) -1 (iii) $2\sin 76^\circ$ (iv) $2\sin 14^\circ$ (v) 0

18. $\cot 58^\circ - \tan 32^\circ =$

(i) 0 (ii) $2\sin 32^\circ$ (iii) -1 (iv) 1 (v) $2\sin 58^\circ$

19. $\sec 2^\circ - \operatorname{cosec} 88^\circ =$

(i) 1 (ii) $2\sin 88^\circ$ (iii) -1 (iv) 0 (v) $2\sin 2^\circ$

20. $\operatorname{cosec} 7^\circ - \sec 83^\circ =$

(i) $2\sin 7^\circ$ (ii) -1 (iii) 1 (iv) $2\sin 83^\circ$ (v) 0

21. $\sin 60^\circ \cos 87^\circ - \cos 30^\circ \sin 3^\circ =$

(i) 1 (ii) $2\sin 60^\circ$ (iii) 0 (iv) $2\sin 87^\circ$ (v) -1

22. $\cos 77^\circ \sin 26^\circ - \sin 13^\circ \cos 64^\circ =$

(i) $2\sin 77^\circ$ (ii) -1 (iii) 1 (iv) 0 (v) $2\sin 26^\circ$

23. $\tan 39^\circ \cot 88^\circ - \cot 51^\circ \tan 2^\circ =$

(i) 0 (ii) $2\sin 39^\circ$ (iii) 1 (iv) -1 (v) $2\sin 88^\circ$

24. $\cot 34^\circ \tan 23^\circ - \tan 56^\circ \cot 67^\circ =$

(i) $2\sin 23^\circ$ (ii) 1 (iii) 0 (iv) -1 (v) $2\sin 34^\circ$

25. $\sec 39^\circ \operatorname{cosec} 57^\circ - \operatorname{cosec} 51^\circ \sec 33^\circ =$

(i) 1 (ii) $2\sin 39^\circ$ (iii) 0 (iv) -1 (v) $2\sin 57^\circ$

26. $\text{cosec}\,53°\sec 24° - \sec 37°\,\text{cosec}\,66° =$

(i) $2\sin 24°$ (ii) 0 (iii) 1 (iv) -1 (v) $2\sin 53°$

27. $\sin 0°\cos 90° + \cos 0°\sin 90° =$

(i) 1 (ii) (-2) (iii) 4 (iv) 0 (v) 2

28. Find the value of $\tan 70°\tan 15°\tan 20°\tan 75°$

(i) 0 (ii) 2 (iii) undefined (iv) 1 (v) -1

29. Find the value of $\cot 15°\cot 10°\cot 75°\cot 80°$

(i) 1 (ii) undefined (iii) 2 (iv) -1 (v) 0

30. $\dfrac{\sin^2 40° + \sin^2 50°}{\cos^2 30° + \cos^2 60°} =$

(i) 2 (ii) undefined (iii) 0 (iv) 1 (v) -1

31. $\dfrac{\sin 5°\cos 85° + \cos 5°\sin 85°}{\sin 30°\cos 60° + \cos 30°\sin 60°} =$

(i) 1 (ii) -1 (iii) undefined (iv) 2 (v) 0

32. $\sin 48° + \cos 53° =$

(i) $\cos 48° + \sin 53°$ (ii) $\cos 42° + \cos 37°$ (iii) $\cos 42° + \sin 37°$ (iv) $\sin 48° + \sin 53°$

33. $\cos 58° + \sin 74° =$

(i) $\sin 58° + \cos 74°$ (ii) $\sin 32° + \cos 16°$ (iii) $\cos 58° + \cos 74°$ (iv) $\sin 32° + \sin 16°$

34. $\tan 14° + \cot 19° =$

(i) $\tan 14° + \tan 19°$ (ii) $\cot 76° + \cot 71°$ (iii) $\cot 14° + \tan 19°$ (iv) $\cot 76° + \tan 71°$

35. $\cot 32° + \tan 49° =$

(i) $\tan 58° + \cot 41°$ (ii) $\cot 32° + \cot 49°$ (iii) $\tan 32° + \cot 49°$ (iv) $\tan 58° + \tan 41°$

36. $\sec 51° + \text{cosec}\,40° =$

(i) $\text{cosec}\,51° + \sec 40°$ (ii) $\sec 51° + \sec 40°$ (iii) $\text{cosec}\,39° + \text{cosec}\,50°$ (iv) $\text{cosec}\,39° + \sec 50°$

37. $\text{cosec}\,25° + \sec 69° =$

(i) $\sec 65° + \sec 21°$ (ii) $\sec 65° + \text{cosec}\,21°$ (iii) $\text{cosec}\,25° + \text{cosec}\,69°$ (iv) $\sec 25° + \text{cosec}\,69°$

Assignment Key

1) (iii)	2) (v)	3) (i)	4) (iv)	5) (ii)	6) (ii)
7) (i)	8) (v)	9) (ii)	10) (v)	11) (iii)	12) (v)
13) (iv)	14) (v)	15) (v)	16) (iv)	17) (v)	18) (i)
19) (iv)	20) (v)	21) (iii)	22) (iv)	23) (i)	24) (iii)
25) (iii)	26) (ii)	27) (i)	28) (iv)	29) (i)	30) (iv)
31) (i)	32) (iii)	33) (ii)	34) (iv)	35) (i)	36) (iv)
37) (ii)					