EduSahara™ Assignment

Name : Trigonometric Expression Evaluation

Chapter : Trigonometrical Ratios

Grade : ICSE Grade IX

1. $\cos 30° \tan 45° \cos 60° - \sin 60° \tan 60° \operatorname{cosec} 45° =$

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

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

   (i) $(\frac{4}{3}\sqrt{6} + \frac{4}{\sqrt{3}})$ (ii) $(\frac{4}{3}\sqrt{8} + \sqrt{3})$ (iii) $(\frac{4}{3}\sqrt{6} + 3)$ (iv) $(\frac{4}{3}\sqrt{6} + \sqrt{3})$ (v) $(\frac{4}{3}\sqrt{3} + \sqrt{3})$

3. $\dfrac{\sin 11°}{\cos 79°} =$

   (i) 0 (ii) $\tan 79°$ (iii) $\tan 11°$ (iv) 1 (v) -1

4. $\dfrac{\cos 73°}{\sin 17°} =$

   (i) -1 (ii) $\tan 73°$ (iii) 0 (iv) 1 (v) $\tan 17°$

5. $\dfrac{\tan 38°}{\cot 52°} =$

   (i) 0 (ii) $\tan 52°$ (iii) -1 (iv) 1 (v) $\tan 38°$

6. $\dfrac{\cot 33°}{\tan 57°} =$

   (i) 0 (ii) -1 (iii) $\tan 33°$ (iv) $\tan 57°$ (v) 1

7. $\dfrac{\sec 16°}{\operatorname{cosec} 74°} =$

   (i) $\tan 74°$ (ii) 0 (iii) -1 (iv) $\tan 16°$ (v) 1

8. $\dfrac{\operatorname{cosec} 2°}{\sec 88°} =$

   (i) 1 (ii) 0 (iii) -1 (iv) $\tan 2°$ (v) $\tan 88°$

9. $\dfrac{\sin 54° \cos 64°}{\cos 36° \sin 26°} =$

   (i) 0 (ii) $\tan 64°$ (iii) $\tan 54°$ (iv) 1 (v) -1

10. $\dfrac{\cos 85° \sin 80°}{\sin 5° \cos 10°} =$

    (i) 1 (ii) $\tan 80°$ (iii) 0 (iv) -1 (v) $\tan 85°$

11. $\frac{\tan 32° \cot 3°}{\cot 58° \tan 87°} =$

(i) -1 (ii) $\tan 3°$ (iii) 0 (iv) $\tan 32°$ (v) 1

12. $\frac{\cot 34° \tan 2°}{\tan 56° \cot 88°} =$

(i) 0 (ii) $\tan 34°$ (iii) $\tan 2°$ (iv) 1 (v) -1

13. $\frac{\sec 43° \operatorname{cosec} 70°}{\operatorname{cosec} 47° \sec 20°} =$

(i) $\tan 43°$ (ii) $\tan 70°$ (iii) -1 (iv) 0 (v) 1

14. $\frac{\operatorname{cosec} 42° \sec 79°}{\sec 48° \operatorname{cosec} 11°} =$

(i) $\tan 79°$ (ii) 0 (iii) 1 (iv) $\tan 42°$ (v) -1

15. $\sin 34° - \cos 56° =$

(i) $2\sin 56°$ (ii) $2\sin 34°$ (iii) 1 (iv) -1 (v) 0

16. $\cos 84° - \sin 6° =$

(i) 1 (ii) $2\sin 84°$ (iii) 0 (iv) $2\sin 6°$ (v) -1

17. $\tan 11° - \cot 79° =$

(i) 1 (ii) -1 (iii) 0 (iv) $2\sin 79°$ (v) $2\sin 11°$

18. $\cot 61° - \tan 29° =$

(i) $2\sin 29°$ (ii) $2\sin 61°$ (iii) 1 (iv) -1 (v) 0

19. $\sec 34° - \operatorname{cosec} 56° =$

(i) 1 (ii) 0 (iii) $2\sin 56°$ (iv) -1 (v) $2\sin 34°$

20. $\operatorname{cosec} 50° - \sec 40° =$

(i) $2\sin 40°$ (ii) -1 (iii) 1 (iv) 0 (v) $2\sin 50°$

21. $\sin 62° \cos 87° - \cos 28° \sin 3° =$

(i) 1 (ii) 0 (iii) $2\sin 62°$ (iv) $2\sin 87°$ (v) -1

22. $\cos 68° \sin 74° - \sin 22° \cos 16° =$

(i) -1 (ii) $2\sin 68°$ (iii) $2\sin 74°$ (iv) 0 (v) 1

23. $\tan 54° \cot 4° - \cot 36° \tan 86° =$

(i) 0 (ii) 1 (iii) $2\sin 4°$ (iv) -1 (v) $2\sin 54°$

24. $\cot 15° \tan 37° - \tan 75° \cot 53° =$

(i) 1 (ii) -1 (iii) 0 (iv) $2\sin 37°$ (v) $2\sin 15°$

25. $\sec 18° \operatorname{cosec} 22° - \operatorname{cosec} 72° \sec 68° =$

(i) $2\sin 18°$ (ii) 0 (iii) $2\sin 22°$ (iv) -1 (v) 1

26. $\text{cosec}\,12°\sec 27° - \sec 78°\,\text{cosec}\,63° =$

(i) 1 (ii) 0 (iii) $2\sin 27°$ (iv) $2\sin 12°$ (v) -1

27. Find the value of $\tan 70°\tan 25°\tan 20°\tan 65°$

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

28. Find the value of $\cot 5°\cot 35°\cot 85°\cot 55°$

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

29. $\sin 71° + \cos 77° =$

(i) $\sin 71° + \sin 77°$ (ii) $\cos 19° + \cos 13°$ (iii) $\cos 19° + \sin 13°$ (iv) $\cos 71° + \sin 77°$

30. $\cos 65° + \sin 38° =$

(i) $\sin 25° + \sin 52°$ (ii) $\sin 25° + \cos 52°$ (iii) $\cos 65° + \cos 38°$ (iv) $\sin 65° + \cos 38°$

31. $\tan 43° + \cot 42° =$

(i) $\cot 43° + \tan 42°$ (ii) $\cot 47° + \tan 48°$ (iii) $\tan 43° + \tan 42°$ (iv) $\cot 47° + \cot 48°$

32. $\cot 59° + \tan 66° =$

(i) $\tan 31° + \cot 24°$ (ii) $\tan 59° + \cot 66°$ (iii) $\cot 59° + \cot 66°$ (iv) $\tan 31° + \tan 24°$

33. $\sec 65° + \text{cosec}\,41° =$

(i) $\text{cosec}\,65° + \sec 41°$ (ii) $\sec 65° + \sec 41°$ (iii) $\text{cosec}\,25° + \text{cosec}\,49°$ (iv) $\text{cosec}\,25° + \sec 49°$

34. $\text{cosec}\,74° + \sec 65° =$

(i) $\sec 74° + \text{cosec}\,65°$ (ii) $\text{cosec}\,74° + \text{cosec}\,65°$ (iii) $\sec 16° + \text{cosec}\,25°$ (iv) $\sec 16° + \sec 25°$

Assignment Key

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