EduSahara™ Assignment

Name : Trigonometric ratios in terms of other ratios

Chapter : Trigonometrical Identities

Grade : ICSE Grade X

1. Express $\sin\theta$ in terms of $\cos\theta$

(i) $\frac{\sqrt{1-\cos^2\theta}}{\cos\theta}$ (ii) $\frac{\cos\theta}{\sqrt{1-\cos^2\theta}}$ (iii) $\frac{1}{\sqrt{1-\cos^2\theta}}$ (iv) $\sqrt{1-\cos^2\theta}$ (v) $\frac{1}{\cos\theta}$

2. Express $\sin\theta$ in terms of $\tan\theta$

(i) $\frac{1}{\tan\theta}$ (ii) $\frac{\tan\theta}{\sqrt{1+\tan^2\theta}}$ (iii) $\frac{\sqrt{1+\tan^2\theta}}{\tan\theta}$ (iv) $\sqrt{1+\tan^2\theta}$ (v) $\frac{1}{\sqrt{1+\tan^2\theta}}$

3. Express $\sin\theta$ in terms of $\cot\theta$

(i) $\sqrt{1+\cot^2\theta}$ (ii) $\frac{1}{\sqrt{1+\cot^2\theta}}$ (iii) $\frac{\sqrt{1+\cot^2\theta}}{\cot\theta}$ (iv) $\frac{\cot\theta}{\sqrt{1+\cot^2\theta}}$ (v) $\frac{1}{\cot\theta}$

4. Express $\sin\theta$ in terms of $\sec\theta$

(i) $\frac{1}{\sqrt{\sec^2\theta-1}}$ (ii) $\frac{\sqrt{\sec^2\theta-1}}{\sec\theta}$ (iii) $\frac{1}{\sec\theta}$ (iv) $\frac{\sec\theta}{\sqrt{\sec^2\theta-1}}$ (v) $\sqrt{\sec^2\theta-1}$

5. Express $\sin\theta$ in terms of $\operatorname{cosec}\theta$

(i) $\frac{\operatorname{cosec}\theta}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (ii) $\frac{1}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (iii) $\sqrt{\operatorname{cosec}^2\theta-1}$ (iv) $\frac{\sqrt{\operatorname{cosec}^2\theta-1}}{\operatorname{cosec}\theta}$ (v) $\frac{1}{\operatorname{cosec}\theta}$

6. Express $\cos\theta$ in terms of $\sin\theta$

(i) $\sqrt{1-\sin^2\theta}$ (ii) $\frac{1}{\sqrt{1-\sin^2\theta}}$ (iii) $\frac{1}{\sin\theta}$ (iv) $\frac{\sqrt{1-\sin^2\theta}}{\sin\theta}$ (v) $\frac{\sin\theta}{\sqrt{1-\sin^2\theta}}$

7. Express $\cos\theta$ in terms of $\tan\theta$

(i) $\frac{1}{\sqrt{1+\tan^2\theta}}$ (ii) $\frac{1}{\tan\theta}$ (iii) $\frac{\sqrt{1+\tan^2\theta}}{\tan\theta}$ (iv) $\frac{\tan\theta}{\sqrt{1+\tan^2\theta}}$ (v) $\sqrt{1+\tan^2\theta}$

8. Express $\cos\theta$ in terms of $\cot\theta$

(i) $\dfrac{\cot\theta}{\sqrt{1+\cot^2\theta}}$ (ii) $\dfrac{1}{\cot\theta}$ (iii) $\dfrac{1}{\sqrt{1+\cot^2\theta}}$ (iv) $\dfrac{\sqrt{1+\cot^2\theta}}{\cot\theta}$ (v) $\sqrt{1+\cot^2\theta}$

9. Express $\cos\theta$ in terms of $\sec\theta$

(i) $\dfrac{1}{\sqrt{\sec^2\theta-1}}$ (ii) $\dfrac{\sqrt{\sec^2\theta-1}}{\sec\theta}$ (iii) $\sqrt{\sec^2\theta-1}$ (iv) $\dfrac{1}{\sec\theta}$ (v) $\dfrac{\sec\theta}{\sqrt{\sec^2\theta-1}}$

10. Express $\cos\theta$ in terms of $\operatorname{cosec}\theta$

(i) $\dfrac{\sqrt{\operatorname{cosec}^2\theta-1}}{\operatorname{cosec}\theta}$ (ii) $\dfrac{1}{\operatorname{cosec}\theta}$ (iii) $\dfrac{1}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (iv) $\dfrac{\operatorname{cosec}\theta}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (v) $\sqrt{\operatorname{cosec}^2\theta-1}$

11. Express $\tan\theta$ in terms of $\sin\theta$

(i) $\dfrac{1}{\sin\theta}$ (ii) $\dfrac{\sqrt{1-\sin^2\theta}}{\sin\theta}$ (iii) $\sqrt{1-\sin^2\theta}$ (iv) $\dfrac{\sin\theta}{\sqrt{1-\sin^2\theta}}$ (v) $\dfrac{1}{\sqrt{1-\sin^2\theta}}$

12. Express $\tan\theta$ in terms of $\cos\theta$

(i) $\sqrt{1-\cos^2\theta}$ (ii) $\dfrac{1}{\sqrt{1-\cos^2\theta}}$ (iii) $\dfrac{1}{\cos\theta}$ (iv) $\dfrac{\sqrt{1-\cos^2\theta}}{\cos\theta}$ (v) $\dfrac{\cos\theta}{\sqrt{1-\cos^2\theta}}$

13. Express $\tan\theta$ in terms of $\cot\theta$

(i) $\dfrac{1}{\cot\theta}$ (ii) $\dfrac{\sqrt{1+\cot^2\theta}}{\cot\theta}$ (iii) $\sqrt{1+\cot^2\theta}$ (iv) $\dfrac{1}{\sqrt{1+\cot^2\theta}}$ (v) $\dfrac{\cot\theta}{\sqrt{1+\cot^2\theta}}$

14. Express $\tan\theta$ in terms of $\sec\theta$

(i) $\dfrac{1}{\sqrt{\sec^2\theta-1}}$ (ii) $\sqrt{\sec^2\theta-1}$ (iii) $\dfrac{\sec\theta}{\sqrt{\sec^2\theta-1}}$ (iv) $\dfrac{\sqrt{\sec^2\theta-1}}{\sec\theta}$ (v) $\dfrac{1}{\sec\theta}$

15. Express $\tan\theta$ in terms of $\operatorname{cosec}\theta$

(i) $\dfrac{1}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (ii) $\dfrac{\sqrt{\operatorname{cosec}^2\theta-1}}{\operatorname{cosec}\theta}$ (iii) $\sqrt{\operatorname{cosec}^2\theta-1}$ (iv) $\dfrac{\operatorname{cosec}\theta}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (v) $\dfrac{1}{\operatorname{cosec}\theta}$

16. Express $\cot\theta$ in terms of $\sin\theta$

(i) $\dfrac{1}{\sin\theta}$ (ii) $\dfrac{1}{\sqrt{1-\sin^2\theta}}$ (iii) $\dfrac{\sqrt{1-\sin^2\theta}}{\sin\theta}$ (iv) $\dfrac{\sin\theta}{\sqrt{1-\sin^2\theta}}$ (v) $\sqrt{1-\sin^2\theta}$

17. Express $\cot\theta$ in terms of $\cos\theta$

(i) $\frac{1}{\sqrt{1-\cos^2\theta}}$ (ii) $\frac{\sqrt{1-\cos^2\theta}}{\cos\theta}$ (iii) $\frac{1}{\cos\theta}$ (iv) $\sqrt{1-\cos^2\theta}$ (v) $\frac{\cos\theta}{\sqrt{1-\cos^2\theta}}$

18. Express $\cot\theta$ in terms of $\tan\theta$

(i) $\frac{1}{\sqrt{1+\tan^2\theta}}$ (ii) $\frac{\sqrt{1+\tan^2\theta}}{\tan\theta}$ (iii) $\frac{\tan\theta}{\sqrt{1+\tan^2\theta}}$ (iv) $\sqrt{1+\tan^2\theta}$ (v) $\frac{1}{\tan\theta}$

19. Express $\cot\theta$ in terms of $\sec\theta$

(i) $\frac{\sqrt{\sec^2\theta-1}}{\sec\theta}$ (ii) $\sqrt{\sec^2\theta-1}$ (iii) $\frac{\sec\theta}{\sqrt{\sec^2\theta-1}}$ (iv) $\frac{1}{\sec\theta}$ (v) $\frac{1}{\sqrt{\sec^2\theta-1}}$

20. Express $\cot\theta$ in terms of $\operatorname{cosec}\theta$

(i) $\frac{\operatorname{cosec}\theta}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (ii) $\frac{\sqrt{\operatorname{cosec}^2\theta-1}}{\operatorname{cosec}\theta}$ (iii) $\frac{1}{\operatorname{cosec}\theta}$ (iv) $\sqrt{\operatorname{cosec}^2\theta-1}$ (v) $\frac{1}{\sqrt{\operatorname{cosec}^2\theta-1}}$

21. Express $\sec\theta$ in terms of $\sin\theta$

(i) $\sqrt{1-\sin^2\theta}$ (ii) $\frac{1}{\sqrt{1-\sin^2\theta}}$ (iii) $\frac{\sqrt{1-\sin^2\theta}}{\sin\theta}$ (iv) $\frac{\sin\theta}{\sqrt{1-\sin^2\theta}}$ (v) $\frac{1}{\sin\theta}$

22. Express $\sec\theta$ in terms of $\cos\theta$

(i) $\frac{\cos\theta}{\sqrt{1-\cos^2\theta}}$ (ii) $\sqrt{1-\cos^2\theta}$ (iii) $\frac{1}{\sqrt{1-\cos^2\theta}}$ (iv) $\frac{\sqrt{1-\cos^2\theta}}{\cos\theta}$ (v) $\frac{1}{\cos\theta}$

23. Express $\sec\theta$ in terms of $\tan\theta$

(i) $\frac{1}{\tan\theta}$ (ii) $\frac{\sqrt{1+\tan^2\theta}}{\tan\theta}$ (iii) $\frac{1}{\sqrt{1+\tan^2\theta}}$ (iv) $\frac{\tan\theta}{\sqrt{1+\tan^2\theta}}$ (v) $\sqrt{1+\tan^2\theta}$

24. Express $\sec\theta$ in terms of $\cot\theta$

(i) $\frac{1}{\cot\theta}$ (ii) $\frac{1}{\sqrt{1+\cot^2\theta}}$ (iii) $\sqrt{1+\cot^2\theta}$ (iv) $\frac{\sqrt{1+\cot^2\theta}}{\cot\theta}$ (v) $\frac{\cot\theta}{\sqrt{1+\cot^2\theta}}$

25. Express $\sec\theta$ in terms of $\operatorname{cosec}\theta$

(i) $\frac{\operatorname{cosec}\theta}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (ii) $\frac{1}{\sqrt{\operatorname{cosec}^2\theta-1}}$ (iii) $\frac{1}{\operatorname{cosec}\theta}$ (iv) $\frac{\sqrt{\operatorname{cosec}^2\theta-1}}{\operatorname{cosec}\theta}$ (v) $\sqrt{\operatorname{cosec}^2\theta-1}$

26. Express $\operatorname{cosec}\theta$ in terms of $\sin\theta$

(i) $\dfrac{\sin\theta}{\sqrt{1-\sin^2\theta}}$ (ii) $\dfrac{1}{\sqrt{1-\sin^2\theta}}$ (iii) $\dfrac{\sqrt{1-\sin^2\theta}}{\sin\theta}$ (iv) $\sqrt{1-\sin^2\theta}$ (v) $\dfrac{1}{\sin\theta}$

27. Express $\operatorname{cosec}\theta$ in terms of $\cos\theta$

(i) $\dfrac{1}{\sqrt{1-\cos^2\theta}}$ (ii) $\dfrac{\sqrt{1-\cos^2\theta}}{\cos\theta}$ (iii) $\dfrac{\cos\theta}{\sqrt{1-\cos^2\theta}}$ (iv) $\dfrac{1}{\cos\theta}$ (v) $\sqrt{1-\cos^2\theta}$

28. Express $\operatorname{cosec}\theta$ in terms of $\tan\theta$

(i) $\dfrac{\tan\theta}{\sqrt{1+\tan^2\theta}}$ (ii) $\dfrac{\sqrt{1+\tan^2\theta}}{\tan\theta}$ (iii) $\sqrt{1+\tan^2\theta}$ (iv) $\dfrac{1}{\sqrt{1+\tan^2\theta}}$ (v) $\dfrac{1}{\tan\theta}$

29. Express $\operatorname{cosec}\theta$ in terms of $\cot\theta$

(i) $\dfrac{1}{\cot\theta}$ (ii) $\sqrt{1+\cot^2\theta}$ (iii) $\dfrac{\cot\theta}{\sqrt{1+\cot^2\theta}}$ (iv) $\dfrac{1}{\sqrt{1+\cot^2\theta}}$ (v) $\dfrac{\sqrt{1+\cot^2\theta}}{\cot\theta}$

30. Express $\operatorname{cosec}\theta$ in terms of $\sec\theta$

(i) $\dfrac{\sqrt{\sec^2\theta-1}}{\sec\theta}$ (ii) $\dfrac{1}{\sec\theta}$ (iii) $\dfrac{1}{\sqrt{\sec^2\theta-1}}$ (iv) $\sqrt{\sec^2\theta-1}$ (v) $\dfrac{\sec\theta}{\sqrt{\sec^2\theta-1}}$

31. Express $\sin 62°$ in terms of $\cos 62°$

(i) $\sqrt{1-\cos^2 62°}$ (ii) $\dfrac{1}{\sqrt{1-\cos^2 62°}}$ (iii) $\dfrac{\cos 62°}{\sqrt{1-\cos^2 62°}}$ (iv) $\dfrac{\sqrt{1-\cos^2 62°}}{\cos 62°}$ (v) $\dfrac{1}{\cos 62°}$

32. Express $\sin 38°$ in terms of $\tan 38°$

(i) $\dfrac{\tan 38°}{\sqrt{1+\tan^2 38°}}$ (ii) $\sqrt{1+\tan^2 38°}$ (iii) $\dfrac{\sqrt{1+\tan^2 38°}}{\tan 38°}$ (iv) $\dfrac{1}{\sqrt{1+\tan^2 38°}}$ (v) $\dfrac{1}{\tan 38°}$

33. Express $\sin 64°$ in terms of $\cot 64°$

(i) $\dfrac{1}{\sqrt{1+\cot^2 64°}}$ (ii) $\sqrt{1+\cot^2 64°}$ (iii) $\dfrac{\cot 64°}{\sqrt{1+\cot^2 64°}}$ (iv) $\dfrac{1}{\cot 64°}$ (v) $\dfrac{\sqrt{1+\cot^2 64°}}{\cot 64°}$

34. Express $\sin 75°$ in terms of $\sec 75°$

(i) $\dfrac{1}{\sec 75°}$ (ii) $\sqrt{\sec^2 75°-1}$ (iii) $\dfrac{\sec 75°}{\sqrt{\sec^2 75°-1}}$ (iv) $\dfrac{1}{\sqrt{\sec^2 75°-1}}$ (v) $\dfrac{\sqrt{\sec^2 75°-1}}{\sec 75°}$

35. Express $\sin 37°$ in terms of $\operatorname{cosec} 37°$

(i) $\dfrac{1}{\sqrt{\operatorname{cosec}^2 37° - 1}}$ (ii) $\sqrt{\operatorname{cosec}^2 37° - 1}$ (iii) $\dfrac{1}{\operatorname{cosec} 37°}$ (iv) $\dfrac{\operatorname{cosec} 37°}{\sqrt{\operatorname{cosec}^2 37° - 1}}$ (v) $\dfrac{\sqrt{\operatorname{cosec}^2 37° - 1}}{\operatorname{cosec} 37°}$

36. Express $\cos 24°$ in terms of $\sin 24°$

(i) $\dfrac{1}{\sqrt{1 - \sin^2 24°}}$ (ii) $\sqrt{1 - \sin^2 24°}$ (iii) $\dfrac{1}{\sin 24°}$ (iv) $\dfrac{\sin 24°}{\sqrt{1 - \sin^2 24°}}$ (v) $\dfrac{\sqrt{1 - \sin^2 24°}}{\sin 24°}$

37. Express $\cos 57°$ in terms of $\tan 57°$

(i) $\dfrac{\tan 57°}{\sqrt{1 + \tan^2 57°}}$ (ii) $\dfrac{1}{\tan 57°}$ (iii) $\dfrac{1}{\sqrt{1 + \tan^2 57°}}$ (iv) $\dfrac{\sqrt{1 + \tan^2 57°}}{\tan 57°}$ (v) $\sqrt{1 + \tan^2 57°}$

38. Express $\cos 21°$ in terms of $\cot 21°$

(i) $\sqrt{1 + \cot^2 21°}$ (ii) $\dfrac{\cot 21°}{\sqrt{1 + \cot^2 21°}}$ (iii) $\dfrac{\sqrt{1 + \cot^2 21°}}{\cot 21°}$ (iv) $\dfrac{1}{\cot 21°}$ (v) $\dfrac{1}{\sqrt{1 + \cot^2 21°}}$

39. Express $\cos 64°$ in terms of $\sec 64°$

(i) $\dfrac{1}{\sec 64°}$ (ii) $\dfrac{\sec 64°}{\sqrt{\sec^2 64° - 1}}$ (iii) $\sqrt{\sec^2 64° - 1}$ (iv) $\dfrac{1}{\sqrt{\sec^2 64° - 1}}$ (v) $\dfrac{\sqrt{\sec^2 64° - 1}}{\sec 64°}$

40. Express $\cos 49°$ in terms of $\operatorname{cosec} 49°$

(i) $\dfrac{1}{\sqrt{\operatorname{cosec}^2 49° - 1}}$ (ii) $\dfrac{1}{\operatorname{cosec} 49°}$ (iii) $\sqrt{\operatorname{cosec}^2 49° - 1}$ (iv) $\dfrac{\operatorname{cosec} 49°}{\sqrt{\operatorname{cosec}^2 49° - 1}}$ (v) $\dfrac{\sqrt{\operatorname{cosec}^2 49° - 1}}{\operatorname{cosec} 49°}$

41. Express $\tan 48°$ in terms of $\sin 48°$

(i) $\dfrac{\sqrt{1 - \sin^2 48°}}{\sin 48°}$ (ii) $\sqrt{1 - \sin^2 48°}$ (iii) $\dfrac{1}{\sqrt{1 - \sin^2 48°}}$ (iv) $\dfrac{\sin 48°}{\sqrt{1 - \sin^2 48°}}$ (v) $\dfrac{1}{\sin 48°}$

42. Express $\tan 67°$ in terms of $\cos 67°$

(i) $\dfrac{1}{\sqrt{1 - \cos^2 67°}}$ (ii) $\sqrt{1 - \cos^2 67°}$ (iii) $\dfrac{\cos 67°}{\sqrt{1 - \cos^2 67°}}$ (iv) $\dfrac{1}{\cos 67°}$ (v) $\dfrac{\sqrt{1 - \cos^2 67°}}{\cos 67°}$

43. Express $\tan 32°$ in terms of $\cot 32°$

(i) $\dfrac{1}{\sqrt{1 + \cot^2 32°}}$ (ii) $\dfrac{1}{\cot 32°}$ (iii) $\dfrac{\sqrt{1 + \cot^2 32°}}{\cot 32°}$ (iv) $\sqrt{1 + \cot^2 32°}$ (v) $\dfrac{\cot 32°}{\sqrt{1 + \cot^2 32°}}$

44. Express $\tan 40°$ in terms of $\sec 40°$

(i) $\frac{1}{\sec 40°}$ (ii) $\frac{1}{\sqrt{\sec^2 40° - 1}}$ (iii) $\frac{\sqrt{\sec^2 40° - 1}}{\sec 40°}$ (iv) $\sqrt{\sec^2 40° - 1}$ (v) $\frac{\sec 40°}{\sqrt{\sec^2 40° - 1}}$

45. Express $\tan 22°$ in terms of $\operatorname{cosec} 22°$

(i) $\frac{1}{\operatorname{cosec} 22°}$ (ii) $\frac{\sqrt{\operatorname{cosec}^2 22° - 1}}{\operatorname{cosec} 22°}$ (iii) $\frac{1}{\sqrt{\operatorname{cosec}^2 22° - 1}}$ (iv) $\frac{\operatorname{cosec} 22°}{\sqrt{\operatorname{cosec}^2 22° - 1}}$ (v) $\sqrt{\operatorname{cosec}^2 22° - 1}$

46. Express $\cot 59°$ in terms of $\sin 59°$

(i) $\frac{\sqrt{1 - \sin^2 59°}}{\sin 59°}$ (ii) $\sqrt{1 - \sin^2 59°}$ (iii) $\frac{\sin 59°}{\sqrt{1 - \sin^2 59°}}$ (iv) $\frac{1}{\sin 59°}$ (v) $\frac{1}{\sqrt{1 - \sin^2 59°}}$

47. Express $\cot 59°$ in terms of $\cos 59°$

(i) $\frac{1}{\cos 59°}$ (ii) $\sqrt{1 - \cos^2 59°}$ (iii) $\frac{\cos 59°}{\sqrt{1 - \cos^2 59°}}$ (iv) $\frac{1}{\sqrt{1 - \cos^2 59°}}$ (v) $\frac{\sqrt{1 - \cos^2 59°}}{\cos 59°}$

48. Express $\cot 33°$ in terms of $\tan 33°$

(i) $\frac{1}{\tan 33°}$ (ii) $\sqrt{1 + \tan^2 33°}$ (iii) $\frac{1}{\sqrt{1 + \tan^2 33°}}$ (iv) $\frac{\sqrt{1 + \tan^2 33°}}{\tan 33°}$ (v) $\frac{\tan 33°}{\sqrt{1 + \tan^2 33°}}$

49. Express $\cot 25°$ in terms of $\sec 25°$

(i) $\frac{\sqrt{\sec^2 25° - 1}}{\sec 25°}$ (ii) $\frac{1}{\sqrt{\sec^2 25° - 1}}$ (iii) $\frac{\sec 25°}{\sqrt{\sec^2 25° - 1}}$ (iv) $\sqrt{\sec^2 25° - 1}$ (v) $\frac{1}{\sec 25°}$

50. Express $\cot 67°$ in terms of $\operatorname{cosec} 67°$

(i) $\frac{1}{\sqrt{\operatorname{cosec}^2 67° - 1}}$ (ii) $\frac{1}{\operatorname{cosec} 67°}$ (iii) $\frac{\sqrt{\operatorname{cosec}^2 67° - 1}}{\operatorname{cosec} 67°}$ (iv) $\sqrt{\operatorname{cosec}^2 67° - 1}$ (v) $\frac{\operatorname{cosec} 67°}{\sqrt{\operatorname{cosec}^2 67° - 1}}$

51. Express $\sec 58°$ in terms of $\sin 58°$

(i) $\frac{\sqrt{1 - \sin^2 58°}}{\sin 58°}$ (ii) $\sqrt{1 - \sin^2 58°}$ (iii) $\frac{1}{\sin 58°}$ (iv) $\frac{\sin 58°}{\sqrt{1 - \sin^2 58°}}$ (v) $\frac{1}{\sqrt{1 - \sin^2 58°}}$

52. Express $\sec 68°$ in terms of $\cos 68°$

(i) $\frac{\cos 68°}{\sqrt{1 - \cos^2 68°}}$ (ii) $\frac{\sqrt{1 - \cos^2 68°}}{\cos 68°}$ (iii) $\frac{1}{\cos 68°}$ (iv) $\sqrt{1 - \cos^2 68°}$ (v) $\frac{1}{\sqrt{1 - \cos^2 68°}}$

53. Express $\sec 38°$ in terms of $\tan 38°$

(i) $\frac{1}{\sqrt{1 + \tan^2 38°}}$ (ii) $\frac{1}{\tan 38°}$ (iii) $\frac{\tan 38°}{\sqrt{1 + \tan^2 38°}}$ (iv) $\sqrt{1 + \tan^2 38°}$ (v) $\frac{\sqrt{1 + \tan^2 38°}}{\tan 38°}$

54. Express $\sec 75°$ in terms of $\cot 75°$

(i) $\frac{\sqrt{1 + \cot^2 75°}}{\cot 75°}$ (ii) $\sqrt{1 + \cot^2 75°}$ (iii) $\frac{1}{\cot 75°}$ (iv) $\frac{\cot 75°}{\sqrt{1 + \cot^2 75°}}$ (v) $\frac{1}{\sqrt{1 + \cot^2 75°}}$

55. Express $\sec 47°$ in terms of $\operatorname{cosec} 47°$

(i) $\frac{1}{\sqrt{\operatorname{cosec}^2 47° - 1}}$ (ii) $\sqrt{\operatorname{cosec}^2 47° - 1}$ (iii) $\frac{1}{\operatorname{cosec} 47°}$ (iv) $\frac{\sqrt{\operatorname{cosec}^2 47° - 1}}{\operatorname{cosec} 47°}$ (v) $\frac{\operatorname{cosec} 47°}{\sqrt{\operatorname{cosec}^2 47° - 1}}$

56. Express $\operatorname{cosec} 56°$ in terms of $\sin 56°$

(i) $\frac{1}{\sqrt{1 - \sin^2 56°}}$ (ii) $\sqrt{1 - \sin^2 56°}$ (iii) $\frac{\sin 56°}{\sqrt{1 - \sin^2 56°}}$ (iv) $\frac{1}{\sin 56°}$ (v) $\frac{\sqrt{1 - \sin^2 56°}}{\sin 56°}$

57. Express $\operatorname{cosec} 26°$ in terms of $\cos 26°$

(i) $\frac{\sqrt{1 - \cos^2 26°}}{\cos 26°}$ (ii) $\sqrt{1 - \cos^2 26°}$ (iii) $\frac{1}{\cos 26°}$ (iv) $\frac{\cos 26°}{\sqrt{1 - \cos^2 26°}}$ (v) $\frac{1}{\sqrt{1 - \cos^2 26°}}$

58. Express $\operatorname{cosec} 43°$ in terms of $\tan 43°$

(i) $\sqrt{1 + \tan^2 43°}$ (ii) $\frac{\sqrt{1 + \tan^2 43°}}{\tan 43°}$ (iii) $\frac{1}{\tan 43°}$ (iv) $\frac{\tan 43°}{\sqrt{1 + \tan^2 43°}}$ (v) $\frac{1}{\sqrt{1 + \tan^2 43°}}$

59. Express $\operatorname{cosec} 40°$ in terms of $\cot 40°$

(i) $\frac{1}{\cot 40°}$ (ii) $\frac{\cot 40°}{\sqrt{1 + \cot^2 40°}}$ (iii) $\frac{\sqrt{1 + \cot^2 40°}}{\cot 40°}$ (iv) $\sqrt{1 + \cot^2 40°}$ (v) $\frac{1}{\sqrt{1 + \cot^2 40°}}$

60. Express $\operatorname{cosec} 49°$ in terms of $\sec 49°$

(i) $\sqrt{\sec^2 49° - 1}$ (ii) $\frac{1}{\sec 49°}$ (iii) $\frac{1}{\sqrt{\sec^2 49° - 1}}$ (iv) $\frac{\sec 49°}{\sqrt{\sec^2 49° - 1}}$ (v) $\frac{\sqrt{\sec^2 49° - 1}}{\sec 49°}$

Assignment Key

1) (iv)	2) (ii)	3) (ii)	4) (ii)	5) (v)	6) (i)
7) (i)	8) (i)	9) (iv)	10) (i)	11) (iv)	12) (iv)
13) (i)	14) (ii)	15) (i)	16) (iii)	17) (v)	18) (v)
19) (v)	20) (iv)	21) (ii)	22) (v)	23) (v)	24) (iv)
25) (i)	26) (v)	27) (i)	28) (ii)	29) (ii)	30) (v)
31) (i)	32) (i)	33) (i)	34) (v)	35) (iii)	36) (ii)
37) (iii)	38) (ii)	39) (i)	40) (v)	41) (iv)	42) (v)
43) (ii)	44) (iv)	45) (iii)	46) (i)	47) (iii)	48) (i)
49) (ii)	50) (iv)	51) (v)	52) (iii)	53) (iv)	54) (i)
55) (v)	56) (iv)	57) (v)	58) (ii)	59) (iv)	60) (iv)