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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

31. Express $\sin 52°$ in terms of $\cos 52°$

(i) $\dfrac{\sqrt{1-\cos^2 52°}}{\cos 52°}$ (ii) $\dfrac{\cos 52°}{\sqrt{1-\cos^2 52°}}$ (iii) $\dfrac{1}{\cos 52°}$ (iv) $\sqrt{1-\cos^2 52°}$ (v) $\dfrac{1}{\sqrt{1-\cos^2 52°}}$

32. Express $\sin 68°$ in terms of $\tan 68°$

(i) $\dfrac{1}{\sqrt{1+\tan^2 68°}}$ (ii) $\dfrac{\tan 68°}{\sqrt{1+\tan^2 68°}}$ (iii) $\dfrac{1}{\tan 68°}$ (iv) $\sqrt{1+\tan^2 68°}$ (v) $\dfrac{\sqrt{1+\tan^2 68°}}{\tan 68°}$

33. Express $\sin 25°$ in terms of $\cot 25°$

(i) $\dfrac{1}{\cot 25°}$ (ii) $\dfrac{1}{\sqrt{1+\cot^2 25°}}$ (iii) $\sqrt{1+\cot^2 25°}$ (iv) $\dfrac{\cot 25°}{\sqrt{1+\cot^2 25°}}$ (v) $\dfrac{\sqrt{1+\cot^2 25°}}{\cot 25°}$

34. Express $\sin 59°$ in terms of $\sec 59°$

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

35. Express $\sin 77°$ in terms of $\operatorname{cosec} 77°$

(i) $\dfrac{\operatorname{cosec} 77°}{\sqrt{\operatorname{cosec}^2 77° - 1}}$ (ii) $\dfrac{1}{\sqrt{\operatorname{cosec}^2 77° - 1}}$ (iii) $\dfrac{\sqrt{\operatorname{cosec}^2 77° - 1}}{\operatorname{cosec} 77°}$ (iv) $\sqrt{\operatorname{cosec}^2 77° - 1}$ (v) $\dfrac{1}{\operatorname{cosec} 77°}$

36. Express $\cos 44°$ in terms of $\sin 44°$

(i) $\dfrac{1}{\sqrt{1 - \sin^2 44°}}$ (ii) $\sqrt{1 - \sin^2 44°}$ (iii) $\dfrac{\sqrt{1 - \sin^2 44°}}{\sin 44°}$ (iv) $\dfrac{1}{\sin 44°}$ (v) $\dfrac{\sin 44°}{\sqrt{1 - \sin^2 44°}}$

37. Express $\cos 54°$ in terms of $\tan 54°$

(i) $\dfrac{\tan 54°}{\sqrt{1 + \tan^2 54°}}$ (ii) $\dfrac{1}{\tan 54°}$ (iii) $\dfrac{1}{\sqrt{1 + \tan^2 54°}}$ (iv) $\sqrt{1 + \tan^2 54°}$ (v) $\dfrac{\sqrt{1 + \tan^2 54°}}{\tan 54°}$

38. Express $\cos 48°$ in terms of $\cot 48°$

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

39. Express $\cos 25°$ in terms of $\sec 25°$

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

40. Express $\cos 48°$ in terms of $\operatorname{cosec} 48°$

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

41. Express $\tan 53°$ in terms of $\sin 53°$

(i) $\dfrac{1}{\sin 53°}$ (ii) $\dfrac{\sin 53°}{\sqrt{1 - \sin^2 53°}}$ (iii) $\dfrac{\sqrt{1 - \sin^2 53°}}{\sin 53°}$ (iv) $\dfrac{1}{\sqrt{1 - \sin^2 53°}}$ (v) $\sqrt{1 - \sin^2 53°}$

42. Express $\tan 66°$ in terms of $\cos 66°$

(i) $\dfrac{\sqrt{1 - \cos^2 66°}}{\cos 66°}$ (ii) $\dfrac{1}{\sqrt{1 - \cos^2 66°}}$ (iii) $\sqrt{1 - \cos^2 66°}$ (iv) $\dfrac{\cos 66°}{\sqrt{1 - \cos^2 66°}}$ (v) $\dfrac{1}{\cos 66°}$

43. Express $\tan 21°$ in terms of $\cot 21°$

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

44. Express $\tan 20°$ in terms of $\sec 20°$

(i) $\frac{1}{\sec 20°}$ (ii) $\sqrt{\sec^2 20° - 1}$ (iii) $\frac{\sec 20°}{\sqrt{\sec^2 20° - 1}}$ (iv) $\frac{\sqrt{\sec^2 20° - 1}}{\sec 20°}$ (v) $\frac{1}{\sqrt{\sec^2 20° - 1}}$

45. Express $\tan 57°$ in terms of $\operatorname{cosec} 57°$

(i) $\frac{1}{\operatorname{cosec} 57°}$ (ii) $\sqrt{\operatorname{cosec}^2 57° - 1}$ (iii) $\frac{\sqrt{\operatorname{cosec}^2 57° - 1}}{\operatorname{cosec} 57°}$ (iv) $\frac{\operatorname{cosec} 57°}{\sqrt{\operatorname{cosec}^2 57° - 1}}$ (v) $\frac{1}{\sqrt{\operatorname{cosec}^2 57° - 1}}$

46. Express $\cot 48°$ in terms of $\sin 48°$

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

47. Express $\cot 48°$ in terms of $\cos 48°$

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

48. Express $\cot 46°$ in terms of $\tan 46°$

(i) $\frac{\tan 46°}{\sqrt{1 + \tan^2 46°}}$ (ii) $\sqrt{1 + \tan^2 46°}$ (iii) $\frac{\sqrt{1 + \tan^2 46°}}{\tan 46°}$ (iv) $\frac{1}{\tan 46°}$ (v) $\frac{1}{\sqrt{1 + \tan^2 46°}}$

49. Express $\cot 62°$ in terms of $\sec 62°$

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

50. Express $\cot 28°$ in terms of $\operatorname{cosec} 28°$

(i) $\frac{\sqrt{\operatorname{cosec}^2 28° - 1}}{\operatorname{cosec} 28°}$ (ii) $\frac{1}{\sqrt{\operatorname{cosec}^2 28° - 1}}$ (iii) $\frac{\operatorname{cosec} 28°}{\sqrt{\operatorname{cosec}^2 28° - 1}}$ (iv) $\frac{1}{\operatorname{cosec} 28°}$ (v) $\sqrt{\operatorname{cosec}^2 28° - 1}$

51. Express $\sec 49°$ in terms of $\sin 49°$

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

52. Express $\sec 45°$ in terms of $\cos 45°$

(i) $\sqrt{1 - \cos^2 45°}$ (ii) $\frac{\cos 45°}{\sqrt{1 - \cos^2 45°}}$ (iii) $\frac{1}{\cos 45°}$ (iv) $\frac{1}{\sqrt{1 - \cos^2 45°}}$ (v) $\frac{\sqrt{1 - \cos^2 45°}}{\cos 45°}$

53. Express $\sec 72°$ in terms of $\tan 72°$

(i) $\dfrac{\sqrt{1+\tan^2 72°}}{\tan 72°}$ (ii) $\sqrt{1+\tan^2 72°}$ (iii) $\dfrac{1}{\tan 72°}$ (iv) $\dfrac{1}{\sqrt{1+\tan^2 72°}}$ (v) $\dfrac{\tan 72°}{\sqrt{1+\tan^2 72°}}$

54. Express $\sec 76°$ in terms of $\cot 76°$

(i) $\dfrac{\sqrt{1+\cot^2 76°}}{\cot 76°}$ (ii) $\dfrac{\cot 76°}{\sqrt{1+\cot^2 76°}}$ (iii) $\dfrac{1}{\cot 76°}$ (iv) $\dfrac{1}{\sqrt{1+\cot^2 76°}}$ (v) $\sqrt{1+\cot^2 76°}$

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

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

56. Express $\operatorname{cosec} 36°$ in terms of $\sin 36°$

(i) $\dfrac{1}{\sin 36°}$ (ii) $\dfrac{\sqrt{1-\sin^2 36°}}{\sin 36°}$ (iii) $\sqrt{1-\sin^2 36°}$ (iv) $\dfrac{1}{\sqrt{1-\sin^2 36°}}$ (v) $\dfrac{\sin 36°}{\sqrt{1-\sin^2 36°}}$

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

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

58. Express $\operatorname{cosec} 48°$ in terms of $\tan 48°$

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

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

(i) $\dfrac{\cot 29°}{\sqrt{1+\cot^2 29°}}$ (ii) $\sqrt{1+\cot^2 29°}$ (iii) $\dfrac{1}{\cot 29°}$ (iv) $\dfrac{\sqrt{1+\cot^2 29°}}{\cot 29°}$ (v) $\dfrac{1}{\sqrt{1+\cot^2 29°}}$

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

(i) $\dfrac{1}{\sec 60°}$ (ii) $\dfrac{1}{\sqrt{\sec^2 60° - 1}}$ (iii) $\sqrt{\sec^2 60° - 1}$ (iv) $\dfrac{\sqrt{\sec^2 60° - 1}}{\sec 60°}$ (v) $\dfrac{\sec 60°}{\sqrt{\sec^2 60° - 1}}$

Assignment Key

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