EduSahara™ Learning Center Assignment

Grade : Class X, CBSE
Chapter : Introduction to Trigonometry
Name : Trigonometric ratios in terms of other ratios

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

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

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

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

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

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

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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) $\frac{1}{\cot\theta}$

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

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4. Express $\sin\theta$ 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) $\frac{\sec\theta}{\sqrt{\sec^2\theta-1}}$ (v) $\frac{1}{\sqrt{\sec^2\theta-1}}$

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

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

$\sqrt{\quad 2\theta - 1}$ $\sqrt{\quad 2\theta - 1}$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

θ $\sqrt{\quad}$ $2\theta - 1$ θ

(iv) $\frac{1}{\sqrt{\text{cosec}^2\theta - 1}}$ (v) $\sqrt{\text{cosec}^2\theta - 1}$

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

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

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

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

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

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

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13. Express $\tan\theta$ 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) $\frac{1}{\sqrt{1 + \cot^2\theta}}$ (v) $\frac{1}{\cot\theta}$

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

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

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

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

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

θ $\sqrt{\quad}$ $2\theta - 1$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$\sqrt{\quad 2\theta - 1}$ θ

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

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

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

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

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

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

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

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

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

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

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24. Express $\sec\theta$ 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) $\frac{1}{\sqrt{1 + \cot^2\theta}}$ (v) $\frac{\sqrt{1 + \cot^2\theta}}{\cot\theta}$

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

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

θ θ $\sqrt{\quad}$ $2\theta - 1$

(iv) $\sqrt{\text{cosec}^2\theta - 1}$ (v) $\dfrac{1}{\sqrt{\text{cosec}^2\theta - 1}}$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$\sqrt{\quad 2\theta - 1}$ $\sqrt{\quad 2\theta - 1}$

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

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31. Express $\sin 42°$ in terms of $\cos 42°$

(i) $\frac{\sqrt{1 - \cos^2 42°}}{\cos 42°}$ (ii) $\sqrt{1 - \cos^2 42°}$ (iii) $\frac{1}{\sqrt{1 - \cos^2 42°}}$

(iv) $\frac{\cos 42°}{\sqrt{1 - \cos^2 42°}}$ (v) $\frac{1}{\cos 42°}$

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

(i) $\frac{\sqrt{1 + \tan^2 41°}}{\tan 41°}$ (ii) $\frac{1}{\tan 41°}$ (iii) $\sqrt{1 + \tan^2 41°}$

(iv) $\frac{\tan 41°}{\sqrt{1 + \tan^2 41°}}$ (v) $\frac{1}{\sqrt{1 + \tan^2 41°}}$

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33. Express $\sin 61°$ in terms of $\cot 61°$

(i) $\frac{1}{\cot 61°}$ (ii) $\sqrt{1 + \cot^2 61°}$ (iii) $\frac{1}{\sqrt{1 + \cot^2 61°}}$

(iv) $\frac{\cot 61°}{\sqrt{1 + \cot^2 61°}}$ (v) $\frac{\sqrt{1 + \cot^2 61°}}{\cot 61°}$

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34. Express $\sin 32°$ in terms of $\sec 32°$

(i) $\sqrt{\sec^2 32° - 1}$ (ii) $\frac{\sec 32°}{\sqrt{\sec^2 32° - 1}}$ (iii) $\frac{\sqrt{\sec^2 32° - 1}}{\sec 32°}$

(iv) $\frac{1}{\sec 32°}$ (v) $\frac{1}{\sqrt{\sec^2 32° - 1}}$

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35. Express $\sin 46°$ in terms of $\operatorname{cosec} 46°$

(i) $\frac{1}{\operatorname{cosec}}$ (ii) $\frac{\sqrt{\operatorname{cosec}^2 46° - 1}}{\operatorname{cosec}}$ (iii) $\frac{1}{\operatorname{cosec}}$

$46°$ $46°$ $\sqrt{\ }$ $246° - 1$

(iv) $\sqrt{\text{cosec}^2 46° - 1}$ (v) $\dfrac{\text{cosec}\,46°}{\sqrt{\text{cosec}^2 46° - 1}}$

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36. Express $\cos 42°$ in terms of $\sin 42°$

(i) $\dfrac{1}{\sin 42°}$ (ii) $\dfrac{\sqrt{1 - \sin^2 42°}}{\sin 42°}$ (iii) $\dfrac{1}{\sqrt{1 - \sin^2 42°}}$

(iv) $\sqrt{1 - \sin^2 42°}$ (v) $\dfrac{\sin 42°}{\sqrt{1 - \sin^2 42°}}$

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37. Express $\cos 44°$ in terms of $\tan 44°$

(i) $\dfrac{\sqrt{1 + \tan^2 44°}}{\tan 44°}$ (ii) $\dfrac{1}{\sqrt{1 + \tan^2 44°}}$ (iii) $\dfrac{1}{\tan 44°}$

(iv) $\sqrt{1 + \tan^2 44°}$ (v) $\dfrac{\tan 44°}{\sqrt{1 + \tan^2 44°}}$

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38. Express $\cos 28°$ in terms of $\cot 28°$

(i) $\dfrac{\cot 28°}{\sqrt{1 + \cot^2 28°}}$ (ii) $\dfrac{\sqrt{1 + \cot^2 28°}}{\cot 28°}$ (iii) $\dfrac{1}{\sqrt{1 + \cot^2 28°}}$

(iv) $\dfrac{1}{\cot 28°}$ (v) $\sqrt{1 + \cot^2 28°}$

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39. Express $\cos 57°$ in terms of $\sec 57°$

(i) $\dfrac{\sqrt{\sec^2 57° - 1}}{\sec 57°}$ (ii) $\dfrac{\sec 57°}{\sqrt{\sec^2 57° - 1}}$ (iii) $\dfrac{1}{\sqrt{\sec^2 57° - 1}}$

(iv) $\sqrt{\sec^2 57° - 1}$ (v) $\dfrac{1}{\sec 57°}$

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40. Express $\cos 74°$ in terms of $\text{cosec}\,74°$

(i) $\dfrac{1}{\text{cosec}}$ (ii) $\dfrac{1}{\text{cosec}}$ (iii) $\dfrac{\sqrt{\text{cosec}^2 74° - 1}}{\text{cosec}}$

$\sqrt{\quad}$ $274° - 1$ $74°$ $74°$

(iv) $\sqrt{\text{cosec}^2 74° - 1}$ (v) $\dfrac{\text{cosec}\, 74°}{\sqrt{\text{cosec}^2 74° - 1}}$

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41. Express $\tan 70°$ in terms of $\sin 70°$

(i) $\dfrac{\sin 70°}{\sqrt{1 - \sin^2 70°}}$ (ii) $\dfrac{1}{\sqrt{1 - \sin^2 70°}}$ (iii) $\sqrt{1 - \sin^2 70°}$

(iv) $\dfrac{\sqrt{1 - \sin^2 70°}}{\sin 70°}$ (v) $\dfrac{1}{\sin 70°}$

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42. Express $\tan 39°$ in terms of $\cos 39°$

(i) $\dfrac{\sqrt{1 - \cos^2 39°}}{\cos 39°}$ (ii) $\dfrac{1}{\sqrt{1 - \cos^2 39°}}$ (iii) $\dfrac{1}{\cos 39°}$

(iv) $\dfrac{\cos 39°}{\sqrt{1 - \cos^2 39°}}$ (v) $\sqrt{1 - \cos^2 39°}$

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43. Express $\tan 27°$ in terms of $\cot 27°$

(i) $\sqrt{1 + \cot^2 27°}$ (ii) $\dfrac{\sqrt{1 + \cot^2 27°}}{\cot 27°}$ (iii) $\dfrac{\cot 27°}{\sqrt{1 + \cot^2 27°}}$

(iv) $\dfrac{1}{\cot 27°}$ (v) $\dfrac{1}{\sqrt{1 + \cot^2 27°}}$

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44. Express $\tan 68°$ in terms of $\sec 68°$

(i) $\dfrac{\sec 68°}{\sqrt{\sec^2 68° - 1}}$ (ii) $\dfrac{1}{\sec 68°}$ (iii) $\dfrac{\sqrt{\sec^2 68° - 1}}{\sec 68°}$

(iv) $\sqrt{\sec^2 68° - 1}$ (v) $\dfrac{1}{\sqrt{\sec^2 68° - 1}}$

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45. Express $\tan 45°$ in terms of $\text{cosec}\, 45°$

(i) $\dfrac{\sqrt{\text{cosec}^2 45° - 1}}{\text{cosec}}$ (ii) $\sqrt{\text{cosec}^2 45° - 1}$ (iii) $\dfrac{1}{\text{cosec}}$

45° 45°

(iv) $\frac{1}{\sqrt{\text{cosec}^2 45° - 1}}$ (v) $\frac{\text{cosec}\, 45°}{\sqrt{\text{cosec}^2 45° - 1}}$

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

(i) $\frac{\sin 64°}{\sqrt{1 - \sin^2 64°}}$ (ii) $\frac{1}{\sqrt{1 - \sin^2 64°}}$ (iii) $\frac{\sqrt{1 - \sin^2 64°}}{\sin 64°}$

(iv) $\sqrt{1 - \sin^2 64°}$ (v) $\frac{1}{\sin 64°}$

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47. Express $\cot 45°$ in terms of $\cos 45°$

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

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

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48. Express $\cot 80°$ in terms of $\tan 80°$

(i) $\sqrt{1 + \tan^2 80°}$ (ii) $\frac{1}{\sqrt{1 + \tan^2 80°}}$ (iii) $\frac{\tan 80°}{\sqrt{1 + \tan^2 80°}}$

(iv) $\frac{1}{\tan 80°}$ (v) $\frac{\sqrt{1 + \tan^2 80°}}{\tan 80°}$

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49. Express $\cot 50°$ in terms of $\sec 50°$

(i) $\frac{1}{\sqrt{\sec^2 50° - 1}}$ (ii) $\frac{\sec 50°}{\sqrt{\sec^2 50° - 1}}$ (iii) $\frac{\sqrt{\sec^2 50° - 1}}{\sec 50°}$

(iv) $\frac{1}{\sec 50°}$ (v) $\sqrt{\sec^2 50° - 1}$

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50. Express $\cot 68°$ in terms of $\text{cosec}\, 68°$

(i) $\frac{1}{\text{cosec}}$ (ii) $\frac{\sqrt{\text{cosec}^2 68° - 1}}{\text{cosec}}$ (iii) $\frac{1}{\text{cosec}}$

$\sqrt{\quad}$ $268° - 1$ $68°$ $68°$

(iv) $\sqrt{\text{cosec}^2 68° - 1}$ (v) $\dfrac{\text{cosec}\, 68°}{\sqrt{\text{cosec}^2 68° - 1}}$

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

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

(iv) $\dfrac{\sin 59°}{\sqrt{1 - \sin^2 59°}}$ (v) $\dfrac{1}{\sin 59°}$

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52. Express $\sec 41°$ in terms of $\cos 41°$

(i) $\dfrac{1}{\cos 41°}$ (ii) $\sqrt{1 - \cos^2 41°}$ (iii) $\dfrac{1}{\sqrt{1 - \cos^2 41°}}$

(iv) $\dfrac{\sqrt{1 - \cos^2 41°}}{\cos 41°}$ (v) $\dfrac{\cos 41°}{\sqrt{1 - \cos^2 41°}}$

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53. Express $\sec 69°$ in terms of $\tan 69°$

(i) $\dfrac{1}{\tan 69°}$ (ii) $\dfrac{\sqrt{1 + \tan^2 69°}}{\tan 69°}$ (iii) $\sqrt{1 + \tan^2 69°}$

(iv) $\dfrac{\tan 69°}{\sqrt{1 + \tan^2 69°}}$ (v) $\dfrac{1}{\sqrt{1 + \tan^2 69°}}$

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54. Express $\sec 37°$ in terms of $\cot 37°$

(i) $\dfrac{1}{\cot 37°}$ (ii) $\sqrt{1 + \cot^2 37°}$ (iii) $\dfrac{\cot 37°}{\sqrt{1 + \cot^2 37°}}$

(iv) $\dfrac{\sqrt{1 + \cot^2 37°}}{\cot 37°}$ (v) $\dfrac{1}{\sqrt{1 + \cot^2 37°}}$

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55. Express $\sec 29°$ in terms of $\text{cosec}\, 29°$

(i) $\sqrt{\text{cosec}^2 29° - 1}$ (ii) $\dfrac{1}{\text{cosec}}$ (iii) $\dfrac{1}{\text{cosec}}$

$29°$ $\sqrt{}$ $229° - 1$

(iv) $\frac{\operatorname{cosec} 29°}{\sqrt{\operatorname{cosec}^2 29° - 1}}$ (v) $\frac{\sqrt{\operatorname{cosec}^2 29° - 1}}{\operatorname{cosec} 29°}$

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56. Express $\operatorname{cosec} 80°$ in terms of $\sin 80°$

(i) $\frac{\sin 80°}{\sqrt{1 - \sin^2 80°}}$ (ii) $\frac{\sqrt{1 - \sin^2 80°}}{\sin 80°}$ (iii) $\sqrt{1 - \sin^2 80°}$

(iv) $\frac{1}{\sin 80°}$ (v) $\frac{1}{\sqrt{1 - \sin^2 80°}}$

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57. Express $\operatorname{cosec} 24°$ in terms of $\cos 24°$

(i) $\frac{\sqrt{1 - \cos^2 24°}}{\cos 24°}$ (ii) $\frac{\cos 24°}{\sqrt{1 - \cos^2 24°}}$ (iii) $\sqrt{1 - \cos^2 24°}$

(iv) $\frac{1}{\sqrt{1 - \cos^2 24°}}$ (v) $\frac{1}{\cos 24°}$

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58. Express $\operatorname{cosec} 78°$ in terms of $\tan 78°$

(i) $\frac{\tan 78°}{\sqrt{1 + \tan^2 78°}}$ (ii) $\frac{\sqrt{1 + \tan^2 78°}}{\tan 78°}$ (iii) $\frac{1}{\tan 78°}$

(iv) $\frac{1}{\sqrt{1 + \tan^2 78°}}$ (v) $\sqrt{1 + \tan^2 78°}$

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59. Express $\operatorname{cosec} 34°$ in terms of $\cot 34°$

(i) $\frac{\sqrt{1 + \cot^2 34°}}{\cot 34°}$ (ii) $\sqrt{1 + \cot^2 34°}$ (iii) $\frac{1}{\sqrt{1 + \cot^2 34°}}$

(iv) $\frac{\cot 34°}{\sqrt{1 + \cot^2 34°}}$ (v) $\frac{1}{\cot 34°}$

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60. Express $\operatorname{cosec} 32°$ in terms of $\sec 32°$

(i) $\frac{\sqrt{\sec^2 32° - 1}}{\sec}$ (ii) $\frac{1}{\sec}$ (iii) $\frac{\sec 32°}{\sec}$

$32°$ $\sqrt{\ }$ $232° - 1$ $\sqrt{\ }$ $232° - 1$

(iv) $\sqrt{\sec^2 32° - 1}$ (v) $\frac{1}{\sec 32°}$

Assignment Key

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2) (i)
3) (v)
4) (ii)
5) (v)
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51) (ii)
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56) (iv)
57) (iv)
58) (ii)
59) (ii)
60) (iii)