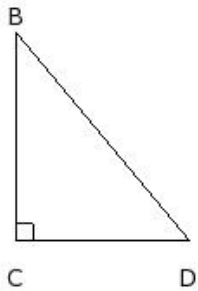




1. From the given figure, find $\tan(90 - D)$

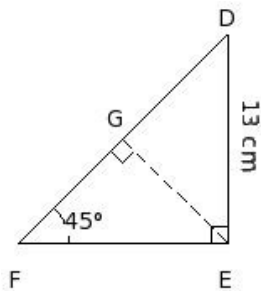


- (i) $\frac{CD}{BD}$ (ii) $\frac{BD}{BC}$ (iii) $\frac{BC}{BD}$ (iv) $\frac{BD}{CD}$ (v) $\frac{CD}{BC}$

2. The value of $\sin 330^\circ$ in terms of an angle between 0° and 90° is

- (i) $\cos 60^\circ$ (ii) $-\cos 60^\circ$ (iii) $\sin 60^\circ$ (iv) $-\sin 60^\circ$

3. In the given figure, $\triangle DFE$ is right angled at E. If $DE = 13$ cm and $\angle F = 45^\circ$, find EF



- (i) 15 cm (ii) 12 cm (iii) 14 cm (iv) 13 cm (v) 11 cm

4. Given that $8\cot\theta = 15$, find $\operatorname{cosec}\theta$

- (i) $\frac{15}{17}$ (ii) $\frac{17}{8}$ (iii) $\frac{8}{15}$ (iv) $\frac{8}{17}$ (v) $\frac{17}{15}$

5. Given $\cos C = \frac{12}{13}$, find $\operatorname{cosec} C$

- (i) $\frac{13}{12}$ (ii) $\frac{5}{12}$ (iii) $\frac{5}{13}$ (iv) $\frac{13}{5}$ (v) $\frac{12}{5}$

6. Express $\sin 77^\circ$ in terms of $\tan 77^\circ$

- (i) $\frac{\sqrt{1 + \tan^2 77^\circ}}{\tan 77^\circ}$ (ii) $\frac{1}{\sqrt{1 + \tan^2 77^\circ}}$ (iii) $\frac{1}{\tan 77^\circ}$ (iv) $\frac{1}{\sqrt{1 + \tan^2 77^\circ}}$ (v) $\frac{\tan 77^\circ}{\sqrt{1 + \tan^2 77^\circ}}$

7. $\cot 74^\circ - \tan 16^\circ =$

- (i) 1 (ii) 0 (iii) $2\sin 16^\circ$ (iv) -1 (v) $2\sin 74^\circ$

8. Given $\cot H = \sqrt{35}$, find $\tan H$

- (i) 6 (ii) $\frac{6}{35}\sqrt{35}$ (iii) $\frac{1}{6}\sqrt{35}$ (iv) $\frac{1}{35}\sqrt{35}$ (v) $\frac{1}{6}$

Find angle θ such that $\cos \theta = 0.9586$

9. **From Table of Natural Cosines**

x°	0'	6'	12'	18'	24'	30'	36'	42'	48'	54'	1'	2'	3'	4'	5'
16	0.9613	0.9608	0.9603	0.9598	0.9593	0.9588	0.9583	0.9578	0.9573	0.9568	1	2	3	3	4

- (i) $16^\circ 37'$ (ii) $16^\circ 42'$ (iii) $16^\circ 22'$ (iv) $16^\circ 32'$ (v) $16^\circ 27'$

10. $\cos(A - B) =$

- (i) $\cos A \cos B + \sin A \sin B$ (ii) $\sin A \cos B - \cos A \sin B$ (iii) $\sin A \cos B + \cos A \sin B$

- (iv) $\cos A \cos B - \sin A \sin B$

11. Which of the following are true?

- a) $\sec(90 - \theta) = \operatorname{cosec} \theta$
 b) $\cot(90 - \theta) = \tan \theta$
 c) $\cos(90 - \theta) = \cos \theta$
 d) $\cos(90 - \theta) = \cot \theta$
 e) $\tan(90 - \theta) = -\tan \theta$
 f) $\operatorname{cosec}(90 - \theta) = \sec \theta$

- (i) {c,a} (ii) {a,b,f} (iii) {d,b} (iv) {d,a,b} (v) {e,c,f}

12. Which of the following are true?

- a) $\sin(270 - \theta) = -\cos \theta$
 b) $\cos(270 - \theta) = -\cos \theta$
 c) $\sin(270 - \theta) = -\sin \theta$
 d) $\tan(270 - \theta) = \tan \theta$
 e) $\cos(270 - \theta) = -\sin \theta$
 f) $\tan(270 - \theta) = \cot \theta$

- (i) {d,b,f} (ii) {b,a} (iii) {c,a,e} (iv) {c,e} (v) {a,e,f}

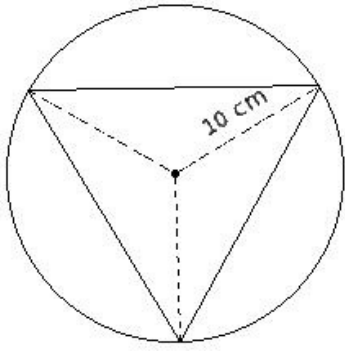
13. Given $\sec D = \frac{17}{15}$, find $\operatorname{cosec} D$

- (i) $\frac{17}{8}$ (ii) $\frac{8}{15}$ (iii) $\frac{15}{17}$ (iv) $\frac{8}{17}$ (v) $\frac{15}{8}$

14. Given $\cos E = \frac{2}{3}\sqrt{2}$, find $\cot E$

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

15. An equilateral triangle is inscribed in a circle of radius 10 cm. Find the length of its sides.



- (i) $10\sqrt{3}$ cm (ii) 10 cm (iii) $15\sqrt{2}$ cm (iv) 30 cm (v) $10\sqrt{18}$ cm

16. Given that $4\sec\theta = 5$, find $\operatorname{cosec}\theta$

- (i) $\frac{4}{3}$ (ii) $\frac{3}{5}$ (iii) $\frac{3}{4}$ (iv) $\frac{4}{5}$ (v) $\frac{5}{3}$

17. Given $\tan F = \frac{4}{3}$, find $\operatorname{cosec} F$

- (i) $\frac{3}{4}$ (ii) $\frac{3}{5}$ (iii) $\frac{5}{4}$ (iv) $\frac{5}{3}$ (v) $\frac{4}{5}$

18. Given $\sec F = \frac{17}{15}$, find $\tan F$

- (i) $\frac{8}{17}$ (ii) $\frac{15}{17}$ (iii) $\frac{8}{15}$ (iv) $\frac{17}{8}$ (v) $\frac{15}{8}$

19. Express $\sin 63^\circ$ in terms of $\cot 63^\circ$

- (i) $\frac{\sqrt{1 + \cot^2 63^\circ}}{\cot 63^\circ}$ (ii) $\frac{1}{\cot 63^\circ}$ (iii) $\frac{\cot 63^\circ}{\sqrt{1 + \cot^2 63^\circ}}$ (iv) $\frac{1}{\sqrt{1 + \cot^2 63^\circ}}$ (v) $\frac{1}{\sqrt{1 + \cot^2 63^\circ}}$

20. Given that $3\operatorname{cosec}\theta = 5$, find $\sin\theta$

- (i) $\frac{3}{5}$ (ii) $\frac{4}{5}$ (iii) $\frac{4}{3}$ (iv) $\frac{5}{4}$ (v) $\frac{3}{4}$

21. The value of $\tan 345^\circ$ in terms of an angle between 0° and 90° is

- (i) $-\tan 75^\circ$ (ii) $-\cot 75^\circ$ (iii) $\cot 75^\circ$ (iv) $\tan 75^\circ$

22. If $\cos 5x = \sin((x+36))$, then $x =$

- (i) 6 (ii) 12 (iii) 9 (iv) 8 (v) 10

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

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

24. The value of $\sec 151^\circ$ in terms of an angle between 0° and 90° is

- (i) $-\operatorname{cosec} 61^\circ$ (ii) $-\sec 61^\circ$ (iii) $\operatorname{cosec} 61^\circ$ (iv) $\sec 61^\circ$

25. In $\triangle JKL$, right angled at K , if $\tan J = \frac{2}{3}$, find $\sin J \cos L + \cos J \sin L$

- (i) $\frac{1}{3}\sqrt{13}$ (ii) $\frac{3}{13}\sqrt{13}$ (iii) $\frac{1}{2}\sqrt{13}$ (iv) $\frac{2}{13}\sqrt{13}$ (v) 1

Assignment Key

1) (v)	2) (ii)	3) (iv)	4) (ii)	5) (iv)	6) (v)
7) (ii)	8) (iv)	9) (iv)	10) (i)	11) (ii)	12) (v)
13) (i)	14) (iii)	15) (i)	16) (v)	17) (iii)	18) (iii)
19) (v)	20) (i)	21) (ii)	22) (iii)	23) (ii)	24) (i)
25) (v)					