



Tenth Grade - Trigonometry

1) Which of the following is the best option for $(\tan x)(\sin x) + \cos x$

- $\sec x$
- None of these
- $\cos x$
- Both a and b

2) Which of the following is the best option for $(\tan y / \sec y)$

- $\cos y$
- $\sin y$
- $\sec y$
- $\tan y$

3) Which of the following is the best option for $(\cot^2 x - 1/\sin^2 x)$

- 0
- 3
- 1
- -1

4) Which of the following is the best option for $(1 + \tan^2 x)(1 + \sin x)(1 - \sin x)$

- 1
- 0
- 7
- 3

5) Which of the following is the best option for $(\tan^2 x - 1/\cos^2 x)$



- 4
- -1
- 5
- 0

6) Which of the following is the best option for $(\sin x / 1 - \cos x)$

- $\operatorname{cosec} x - \cot x$
- 1
- 0
- $\operatorname{cosec} x + \cot x$

7) Which of the following is the best option for $\tan x - \cot x$

- $(2\sin^2 x + 1 / \sin x \cos x)$
- $(2\sin^2 x - 2 / \sin x \cos x)$
- $(2\sin^2 x - 1 / \sin x \cos x)$
- $(2\sin^2 x + 2 / \sin x \cos x)$

8) Which of the following is the best option for $(\sin x + \operatorname{cosec} x)^2 + (\cos x + \sec x)^2$

- $7 - \tan^2 x + \cot^2 x$
- $7 + \tan^3 x + \cot^3 x$
- $7 + \tan^3 x + \cot^2 x$
- $7 + \tan^2 x + \cot^2 x$

9) Which of the following is the best option for $(\sec^2 x - \sec^2 x)$

- $\tan^3 x + \tan^2 x$
- $\tan^2 x + \tan^2 x$
- $\tan^2 x - \tan^2 x$
- $\tan^2 x + \tan^2 x$



10) Which of the following is the best option for $(1/\sec x - \tan x)$

- $\sec x + \tan x$
- $-\sec x - \tan x$
- $\sec x - \tan x$
- $-\sec x + \tan x$

11) Which of the following is the best option for $\cos^2 x - \cos^2 x$

- $\sin^2 x - \sin^2 x$
- $\sin^2 x - \sin^3 x$
- $\sin^2 x - \sin^2 x$
- $\sin^2 x - \sin^3 x$

12) Which of the following is the best option for $(\sec A + \tan A)(1 - \sin A)$

- $\sec A$
- $\tan A$
- $\sin A$
- $\cos A$

13) Which of the following is the best option for $(1 + \sec A) / (\sec A)$

- $(\sec A + 1) / \sec^3 A$
- $(\sec A + 1) / \sec A$
- $(\sec A + 1) / \sec^2 A$
- $(\sec A - 1) / \sec A$

14) Which of the following is the best option for $(\cos A - \sin A + 1) / (\cos A + \sin A - 1)$

- $\operatorname{cosec} A + \cot A$
- $-\operatorname{cosec} A + \cot A$



- $-\operatorname{cosec} A - \cot A$
- $\operatorname{cosec} A - \cot A$

15) Which of the following is the best option for $(\cos x) \times (\tan x) \times (\operatorname{cosec} x)$

- 4
- 9
- 0
- 1

16) Which of the following is the best option for $(1 / \sec^2 x) + (1 / \operatorname{cosec}^2 x)$

- -1
- 7
- 1
- 6

17) Which of the following is the best option for $\tan^2 x (\cos^2 x)$

- $1 - \tan^2 x$
- $1 - \cos^2 x$
- $1 - \operatorname{cosec}^2 x$
- $1 - \sin^2 x$

18) Which of the following is the best option for $(1/\cot^2 x) + (1/\cot^2 x)$

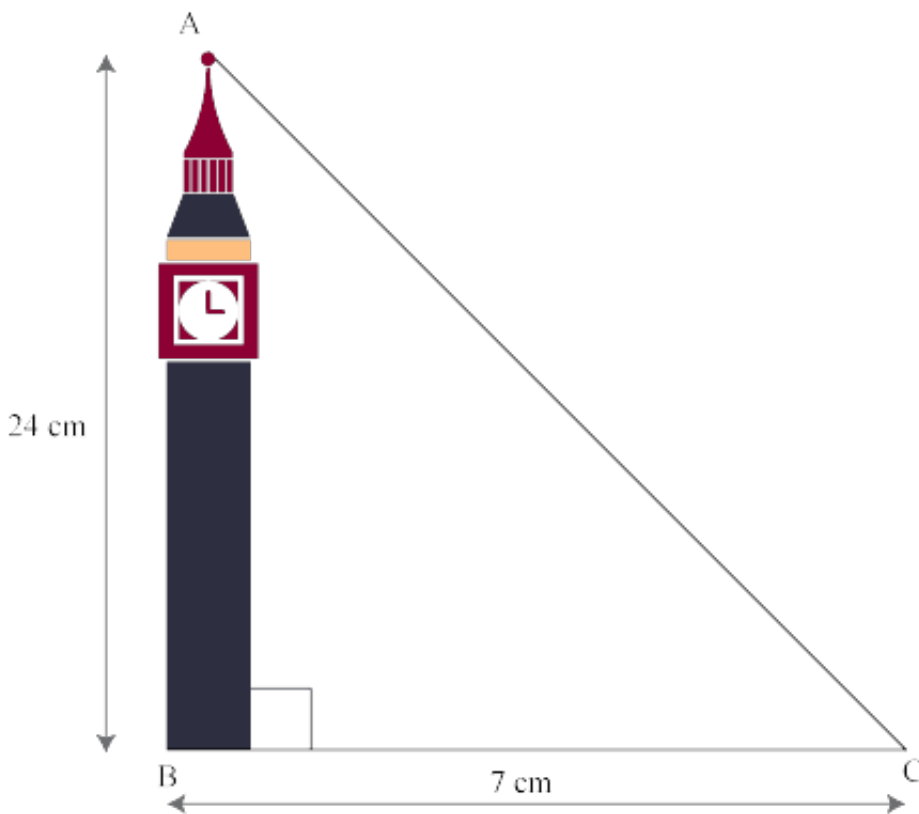
- $\sec^2 x - \sec^2 x$
- $\sec^2 x - \sec^2 x$
- 1
- 9



19) Which of the following is the best option for $(1 + \tan x) / (1 + \cot x)$

- $\cos x / \sin x$
- 1
- -1
- $\sin x / \cos x$

20) In $\triangle ABC$ right angled at B, $AB = 24$ cm, $BC = 7$ m. Find $\sin A$?



- $6/25$
- $7/25$
- $44/25$
- $9/25$

21) If $\sin A = 3/4$, calculate $\cos A$

- $7/4$
- $3/4$
- $2/4$



- $\frac{5}{4}$

22) If Given $15 \cot A = 8$, find $\sin A$

- $\frac{16}{17}$
- $\frac{12}{17}$
- $\frac{11}{17}$
- $\frac{15}{17}$

23) Given $\sec \theta = \frac{13}{12}$, calculate $\tan \theta$?

- $\frac{6}{12}$
- $\frac{7}{12}$
- $\frac{3}{12}$
- $\frac{5}{12}$

24) If $\cot \theta = \frac{7}{8}$, evaluate $(1 + \sin \theta)(1 - \sin \theta) / (1 + \cos \theta)(1 - \cos \theta)$

- $\frac{29}{64}$
- $\frac{49}{64}$
- $\frac{59}{64}$
- $\frac{69}{64}$

25) If $3 \cot A = 4$, evaluate $(1 - \tan^2 A / 1 + \tan^2 A)$

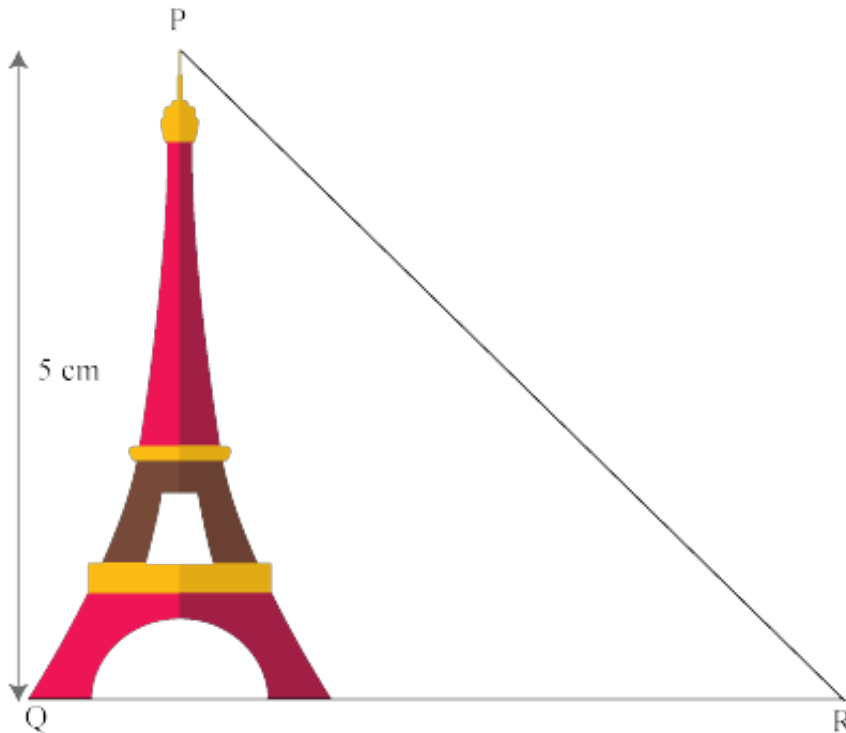
- $\frac{5}{25}$
- $\frac{9}{25}$
- $\frac{8}{25}$
- $\frac{7}{25}$

26) In triangle ABC, right-angled at B, if $\tan A = \frac{1}{\sqrt{3}}$ find the value of $\cos A \cos C - \sin A \sin C$



- 4
- -5
- 1
- 0

27) In triangle PQR, right-angled at Q, $PR + QR = 25$ cm and $PQ = 5$ cm. Determine the values of $\sin P$



- $13/12$
- $12/15$
- $11/13$
- $12/13$

28) $\sin 2A = 2\sin A$ is true when $A = ?$

- 30°
- 60°
- 0°
- 45°



29) Solve $\cos 48^\circ - \sin 42^\circ$

- 30°
- 60°
- 0°
- 45°

30) Solve $\operatorname{cosec} 31^\circ - \sec 59^\circ$

- 0°
- 70°
- 30°
- 45°