Practice Questions - Term I

Date: 13/11/2021

Subject: Mathematics

Topic : Introduction to Trignometry Class: X

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1. In triangle ABC, right angled at B, if $\angle A$ is 45°, find the value of cot A and tan C.

   A. 1, 1

   B. $\sqrt{2}$, $\sqrt{2}$

   C. $\frac{1}{\sqrt{2}}$, $\frac{1}{\sqrt{2}}$

   D. $\frac{1}{\sqrt{3}}$, $\frac{1}{\sqrt{3}}$

2. The value of $cosec\ 30^\circ + cot\ 45^\circ$ is

   A. 1

   B. 2

   C. 3

   D. 4

3. If sin A = $\frac{8}{17}$, find the value of secA cosA + cosecA cosA.

   A. $\frac{6}{23}$

   B. $\frac{8}{15}$

   C. $\frac{15}{8}$

   D. $\frac{23}{8}$

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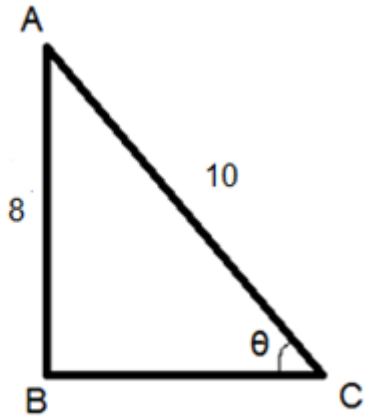
4. What is the value of tan θ in the given triangle?



A. $\frac{3}{5}$

B. $\frac{4}{3}$

C. $\frac{5}{3}$

D. $\frac{4}{5}$

5. If triangle ABC is right angled at B and $sinA = \frac{3}{5}$, then find the value of cos A.

A. $\frac{3}{5}$

B. $\frac{5}{4}$

C. $\frac{4}{5}$

D. $\frac{5}{3}$

6. Find the value of $sin(60^\circ + \theta) - cos(30^\circ - \theta)$.

A. $2\ cos\theta$

B. $2\ sin\theta$

C. 0

D. 1

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7. Which of the following trigonometric ratios will have the same value as cot 53°?

   A. $sin\ 65^\circ$

   B. $tan\ 47^\circ$

   C. $tan\ 37^\circ$

   D. $cosec\ 37^\circ$

8. If tan 2A = cot (A-18°), then find the value of A.

   A. 18°

   B. 36°

   C. 24°

   D. 27°

9. In a right angled triangle ABC (right angled at B),

   the value of tan A $\times$ tan C = _____.

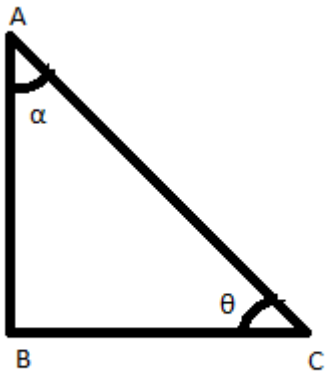
   A. 1

   B. 2

   C. 5

   D. 10

10. In the given right angle triangle, if $Sin\theta = \frac{3}{5}$, then find the value of $3tan\alpha$.



A. 4

B. 3

C. 5

D. 1

11. The value of $sin^2 29^\circ + sin^2 61^\circ$ is

A. 1

B. 0

C. $2\ sin^2 29^\circ$

D. $2\ cos^2 61^\circ$

12. If 5tanθ=4, then value of (5sinθ -4cosθ)/(5sinθ +4cosθ) is:

A. $\frac{5}{3}$

B. 0

C. $\frac{5}{6}$

D. $\frac{1}{6}$

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13. $\frac{\cos\theta}{1-\tan\theta}+\frac{\sin\theta}{1-\cot\theta}=$ ——

A. 1

B. $\cos\theta+\sin\theta$

C. $\cos\theta\sin\theta$

D. $\cos\theta-\sin\theta$

14. The value of $(1-cosA)(1+cosA)(cosec^2A)$ is:

A. 0

B. 1

C. 2

D. 3

15. $9sec^2\theta$ - $9tan^2\theta$ is equal to:

A. 1

B. -1

C. 9

D. -9

16. If $(sec\theta$ - $tan\theta)$ = $\frac{1}{3}$, the value of $(sec\theta$ + $tan\theta)$ is:

A. 1

B. 2

C. 3

D. 4

17. $\frac{cos\ A}{cot\ A} + sin\ A = \ ?$

A. $cot\ A$

B. $2\ sin\ A$

C. $2\ cos\ A$

D. $sec\ A$

18. If in a right-angled triangle ABC angles A and B are acute, then evaluate $1 + \frac{tanA}{tanB} =$

A. 1

B. $sec^2 A$

C. secA

D. 2

19. $sec^4\theta - sec^2\theta$ is equal to

A. $tan^2\theta - tan^4\theta$

B. $tan^4\theta - tan^2\theta$

C. $tan^4\theta + tan^2\theta$

D. $tan\theta + tan^4\theta$

20. $\frac{1+tan^2 A}{1+cot^2 A} =$

A. $sec^2 A$

B. -1

C. $cot^2 A$

D. $tan^2 A$