Introduction to Trigonometry : Worksheet -8

1. $\frac{\sin 4530^\circ}{\tan(-585^\circ)}$ = [ ]

a) 1 b) – 1 c) ½ d) – ½

2. $\sin 1845^\circ . \cos 1755^\circ$ = [ ]

a) $\frac{1}{\sqrt{2}}$ b) $\frac{-1}{\sqrt{2}}$ c) ½ d) – ½

3. If 'θ' lies in the second quadrant and $\tan\theta = \frac{-5}{12}$, then the value of $\frac{2\cos\theta}{1-\sin\theta}$ = [ ]

a) – 2 b) – 3 c) – 1 d) 0

4. The value of $\frac{\cos 3\theta - 2\cos 4\theta}{\sin 3\theta + 2\sin 4\theta}$ when θ = 150° [ ]

a) $\frac{1-\sqrt{3}}{2}$ b) $\frac{1+\sqrt{3}}{2}$ c) $\frac{-1+\sqrt{3}}{2}$ d) $\frac{-(1+\sqrt{3})}{2}$

5. $\sec^2 33^\circ - \cot^2 57^\circ$ = [ ]

a) 0 b) 1 c) – 1 d) ± 1

6. $\sin(-420^\circ)\cos 390^\circ + \cos(-660^\circ)\sin 330^\circ$ = [ ]

a) 0 b) 1 c) – 1 d) none

7. In the equation $\text{cosec}(90^\circ + \theta) + x\cos\theta\cot(90^\circ + \theta) = \sin(90^\circ + \theta)$, the value of x = [ ]

a) sinθ b) cosθ c) tanθ d) cotθ

8. $\frac{\sin 150^\circ - 5\cos 300^\circ + 7\tan 225^\circ}{\tan 135^\circ + 3\sin 210^\circ}$ = [ ]

a) 1 b) – 1 c) 2 d) – 2