King Fahd University of Petroleum and Minerals

Prep-Year Math Program

Math 002 - Term 142

Recitation (7.1)

Question 1:

If the terminal side of an angle θ intersects the unit circle at the point $\left(-\frac{4}{5}, -\frac{3}{5}\right)$, then

Find the exact value of $\sec(-\theta)+\tan(-\theta)$.

Answer: -2

Question 2:

a) Find the exact value of $\sin 44^\circ + \cos 134^\circ + \sin(-510^\circ)$.

b) If $\csc x = -3$, find all possible values of $\frac{\sin x + \cos x}{\sec x}$

Answer (a): $-\frac{1}{2}$ **Answer (b):** $\frac{2\sqrt{2}+8}{9}$, $\frac{-2\sqrt{2}+8}{9}$

Question3 Write $\csc t$ in terms of $\tan t$, where $\pi < t < \frac{3\pi}{2}$..

Answer: $-\frac{\sqrt{\tan^2 t + 1}}{\tan t}$

Question4: Determine whether the function is even, odd, or neither.

A) $f(x) = \frac{x - \sin x}{\cos x}$ B) $f(x) = 2x\tan x - 3\sec x$

Answer (A): f is odd **(B):** f is even

Question 5: If $\tan(-\theta) = \frac{1}{4}$ and $\sec\theta > 0$, then $\sin\theta =$

A) $-\frac{\sqrt{17}}{17}$

B) $\frac{\sqrt{17}}{17}$

C) $\frac{4\sqrt{17}}{17}$

D) $-\frac{4\sqrt{17}}{17}$

E) $\frac{\sqrt{15}}{15}$

Answer: (A) $\sin\theta = -\frac{1}{\sqrt{17}} = -\frac{\sqrt{17}}{17}$