

King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math 002 - Term 151
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): $-\frac{1}{2}$ **(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

Question5: If θ is in quadrant IV and $\sec \theta = \frac{x+4}{x}$, where $x > 0$, then $\tan \theta =$

Answer: $\tan \theta = -\frac{2\sqrt{2x+4}}{x}$