King Fahd University of Petroleum and Minerals
Faculty of Science – Per-Year Math Program
Math 002 - Term 032
Recitation hour (6.5& 6.6)

Please cover at least four questions

Question1

Find the exact value of $Cos[Sin^{-1}(-\frac{3}{5})+\cos^{-1}(\frac{5}{13})]$

Question2

Verify the identity $\sin[2\tan^{-1}(\frac{1-x}{1+x})]=\frac{1-x^2}{1+x^2}$, $x\neq -1$.

Question3

Solve the equation $Sin^{-1}x-\tan^{-1}(-\frac{5}{12})=\frac{\pi}{2}$

Question4

Find the domain and the range of $y=2\cos^{-1}(x-1)-\pi$

Question5

Solve the equation $\sin 3x\cos x-\cos 3x\sin x=\frac{1}{2}$, where $0\le x<2\pi$

Question6

True or False

a. $\tan^{-1}x=\frac{\sin^{-1}x}{\cos^{-1}x}$
b. $\sec(-\sqrt{2})=\frac{3\pi}{4}$
c. $\cos^{-1}(\cos 3)=3$
d. $\cos(\cos^{-1}3)=3$
e. $\tan^{-1}(\tan\frac{4\pi}{3})=\frac{4\pi}{3}$