KFUPM – Department of Mathematics and Statistics – Term 141

MATH 102

QUIZ # 1 Code 1 (Duration = 15 minutes)

NAME:_____ ID:_____ Section: _____

Exercise 1 (5 points)

If $F(x) = \int_{-x}^{x} t \sin^{-1}(t)\,dt$, then $F'(1)$ is equal to:

a/ π	
b/ $\frac{\pi}{2}$	
c/ $-\pi$	
d/ $\frac{-\pi}{2}$	
e/ 0	

Exercise 2 (5 points)

The value of the definite integral $\int_{-1}^{0} \frac{e^{1+x}}{1+e^{2+2x}}\,dx$ is:

a/ $\tan^{-1}(e) - \frac{\pi}{4}$	
b/ $\tan^{-1}(e) + \frac{\pi}{4}$	
c/ $\frac{\pi}{4} - \tan^{-1}(e)$	
d/ $\tan(e) - \frac{\pi}{4}$	
e/ $\tan e + \frac{\pi}{4}$	

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QUIZ # 1 Code 2 (Duration = 15 minutes)

NAME:_____ ID:_____ Section: _____

Exercise 1 (5 points)

The value of the definite integral $\int_0^{\ln 3} \frac{e^x}{1+e^x} dx$ is:

a/ $\ln 4$	
b/ $\ln 2$	
c/ $\ln 3$	
d/ 3	
e/ $e^3 - 1$	

Exercise 2 (5 points)

If $g(x) = \int_{-x}^{x} t \cos^{-1} t dt$, then $g'(1)$ is:

a/ 1	
b/ 0	
c/ -1	
d/ $\frac{\pi}{2}$	
e/ 2	