

1. Find the derivative of

$$g(x) = \int_{\tan x}^{x^2} \frac{dt}{\sqrt{1+t^2}}$$

2. Evaluate $\int_0^{\frac{3\pi}{2}} |\sin t| dt$

3. Evaluate: $\int \frac{tdt}{1+t^4}$

ID# _____

*Quiz 2 MATH 102-101

[25 Minutes]

Serial # _____

1. If $G(x) = \int_1^x g(t) dt$ where $g(t) = \int_1^{t^3} \frac{\sqrt{1+u^4}}{u} du$,
find $G''(2)$.

2. $v(t) = t^2 - 2t - 8$ the velocity function of a particle moving along a line. Find the distance travelled by the particle in the interval $[1, 6]$.

3. Evaluate: $\int \frac{dx}{\cos^2 x \sqrt{1 + \tan x}}$