ID#_____ Name:_____ Quiz 1 MATH 102-T171 Serial#_____

Q1. Evaluate $\int_0^{1/2} \frac{(1+t^2)\sqrt{1-t^2}}{1-t^4}\,dt$ (Hint: Simplify the integrand first)

Q2. Evaluate $\int_{-3}^{3} \left(|x| - \sqrt{1-x^2}\right) dx$ by interpreting it in terms of area .

Q3. Evaluate $\int \frac{\cos x}{1-\cos^2 x}\,dx$

(For solution, use other side of the paper)

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Q1. If $15+\int_3^x e^{-t} f(t)dt = 5x,$ find $f(0)+f'(0).$

Q2. Evaluate $\int \frac{dy}{y\sqrt{4y^2-9}}$

Q3. Evaluate $\int_0^{2\sqrt{2}} \left(3x-2\sqrt{8-x^2}\right)dx$ by interpreting it in terms of area.

(For solution, use other side of the paper)