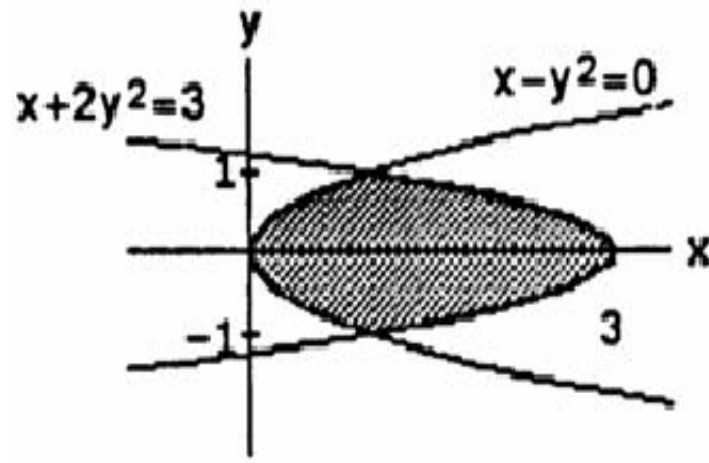


Math 102-15-Term161-Quiz.2

Name: _____ ID: _____

Serial#: _____

1. Let $f(x) = \int_{x^2}^{x^3} \tan^{-1} dt$. Find $f(1) + f'(1)$.
2. A particle is moving on a line with speed $v(t) = (t - 3) \text{ m/s}$. Find the total distance traveled by the particle during the time interval $[0, 4]$.



3. Find the area of the above dashed region.

4. Use substitution to show that $\int_0^{\pi/2} \frac{3 \sin x \cos x}{\sqrt{1 + 3 \sin^2 x}} dx = 1$.