

## Quiz#4

Name:

1. Evaluate:  $\int_0^{\pi/2} \frac{\cos x}{1+\sin x} dx$

2. Evaluate:  $\int_{-2}^6 f(x) dx$  where

$$f(x) = \begin{cases} x^3 - 2x^2 + 4, & \text{if } x < -1; \\ (3x + 4)^{1/2}, & \text{if } -1 \leq x \leq 4; \\ x^2 - 3x, & \text{if } x > 4 \end{cases}$$

3. Find the area of the region completely enclosed by  $f(x) = x^3 - 3x + 3$  and  $g(x) = x + 3$ .

4. Evaluate:  $\int x^2 e^x dx$