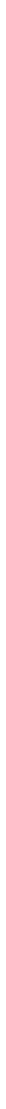


Q1. $\int \frac{x^4 + 1}{x(x^2 + 1)^2} dx$

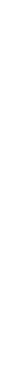


Q2. A student makes the substitution $3x = 2\cos\theta$ where $0 < \theta < \pi$ in an integral. Write the following in terms of x .

i) $\theta =$

ii) $\csc\theta =$

iii) $\tan\theta =$



Q1. $\int \frac{x^2 + 3x}{x^3 + x^2 + x + 1} dx$

Q2. $\int \frac{1}{x^2 + 4x + 5} dx$ (Hint: Complete the square..)