

Math 181 Quiz #9

① Find the average value of the function $f(x) = |(x-1)(x+2)|$ on the interval $0 \leq x \leq 2$.

② Compute the integral $\int_0^{\pi/4} (\cos x)^2 dx$.

③ State the δ - ϵ definition of $\lim_{x \rightarrow p} f(x) = A$.

④ Given $\lim_{x \rightarrow p} f(x) = A$ and $\lim_{x \rightarrow p} g(x) = B$ show that

$\lim_{x \rightarrow p} (f(x) + g(x)) = A + B$ using the δ - ϵ definition.