

Math 181 Honors Quiz #8

① Find the average value of the function $f(x) = \sin^2 x$ on the interval $0 \leq x \leq \frac{\pi}{2}$.

② Find the area of the radial set of $f(\theta) = 3\theta$ over the interval $0 \leq \theta \leq 2\pi$.

② State the definition in terms of δ and ϵ that a function $f(x)$ be continuous at the point p .

③ Show that $f(x) = x^2$ is continuous at $p = 3$ using the δ - ϵ definition.