3.6 HW

$y = x(\ln x)^2$ Let $y = f(x)$

(E) continued

(F) Extrema

$y = 4\cos^2 x - 1$ Let $y = f(x)$

(F) continued

Since y' changes from + to − at $x = \pi$, there exists a local max at

$\boxed{f(\pi) = 3}$

Absolute max is (3) & Absolute m...

$\{f(0) = 3$
$\{f(2\pi) = 3\}$ Endpoints

$y'' = 8\sin x \cdot \sin x + \cos x(-8\cos x)$

$y'' = 8[\sin^2 x - \cos^2 x]$