

4.1 Extrema on an Interval

Name:

Date: June 3, 2015

P 12. Find the critical numbers of $g(x) = x^4 - 8x^2$.

P 14. Find the critical numbers of $f(x) = \frac{4x}{x^2 + 1}$.

P 16. Find the critical numbers of $f(\theta) = 2 \sec \theta + \tan \theta$ for $0 < \theta < 2\pi$.

P 17. Find the critical numbers of $f(t) = te^{-2t}$.

P 24. Find the absolute extrema of $h(x) = 5 - x^2$, on the closed interval $[-3, 1]$.

P 26. Find the absolute extrema of $f(x) = 2x^3 - 6x$, on the closed interval $[0, 3]$.

P 28. Find the absolute extrema of $f(x) = \sqrt[3]{x}$, on the closed interval $[-8, 8]$.

P 44. Find the absolute extrema of $y = x \ln(x + 3)$, on the closed interval $[0, 8]$.