

Maximum and Minimum Values- HW Problems

Find the critical point for:

1. $f(x) = x^3 - 4x^2$

2. $g(x) = x^4 - 4x^2$

3. $f(x) = 2 - x^{\frac{2}{3}}$

Find the absolute maximum and minimum values on each interval.

4. $f(x) = x^3 - 3x^2$ $[-2, 3]$

5. $f(x) = x^3 - 6x^2 + 5$ $[-1, 5]$

6. $f(x) = 3 + x^{\frac{2}{3}}$ $[-1, 1]$

7. $g(x) = \frac{x^2}{x^2+4}$ $[-2, 2]$

8. $f(x) = x^2 + \frac{16}{x}$ $[1, 4]$

9. $f(x) = 3x^{\frac{5}{3}} + 60x^{\frac{2}{3}}$ $[-1, 1]$

10. $g(x) = \sin(2x) + 2 \cos(x)$ $[0, \frac{\pi}{2}]$