
1. (1 pt) The function

$$f(x) = 4x^3 - 30x^2 - 288x - 2$$

is decreasing on the interval (____ , ____).

It is increasing on the interval ($-\infty$, ____) and the interval (____ , ∞).

The function has a local maximum at ____.

2. (1 pt) Let $f(x) = x^3 - (3/2)x^2$ on the interval $[-1, 2]$. Find the absolute maximum and absolute minimum of $f(x)$ on this interval.

The absolute max occurs at $x =$ _____.

The absolute min occurs at $x =$ _____.

3. (1 pt) Let $f(x) = 3x^{2/3} - 2x$ on the interval $[-1, 1]$. Find the absolute maximum and absolute minimum of $f(x)$ on this interval.

The absolute max occurs at $x =$ _____.

The absolute min occurs at $x =$ _____.

4. (1 pt) The function $f(x) = 2x^3 - 30x^2 + 96x - 6$ has two critical numbers. The smaller one equals ____ and the larger one equals ____.