

## 5.5 Determine Absolute Extrema from Candidates

Calculus

Name: \_\_\_\_\_

**CA #1**

Find the absolute maximum value and the absolute minimum value of the function on the given interval.  
Remember to show that you checked ALL the candidates.

1.  $f(x) = -x^2 + 3x$ ,  $[0, 3]$

2.  $f(x) = x^3 - 12x$ ,  $[0, 4]$

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

4.  $f(x) = \cos \pi x$ ,  $\left[0, \frac{3}{2}\right]$

1. $f(0) = 0$ $f\left(\frac{2}{3}\right) = 2.25$ $f(3) = 0$ Min value: 0 Max value: 2.25	2. $f(-2)$ not used $f(0) = 0$ $f(2) = -16$ $f(4) = 16$ Min value: -16 Max value: 16	3. $f(-1) = 5$ $f(0) = 0$ $f(1) = 1$ Min value: 0 Max value: 5	4. $f(0) = 1$ $f(1) = -1$ $f\left(\frac{2}{3}\right) = 0$ Min value: -1 Max value: 1
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