







finding the absolute extrema

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Suppose that  $f(x)$  is continuous on the closed interval  $[a, b]$ . Then  $f(x)$  attains its absolute maximum and minimum values on  $[a, b]$  at either:

- a critical point
- one of the end points

How to find the absolute extrema of a continuous function  $f$  on a finite closed interval:

1. Evaluate  $f$  at all critical points and endpoints
2. Take the largest and smallest of these values

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