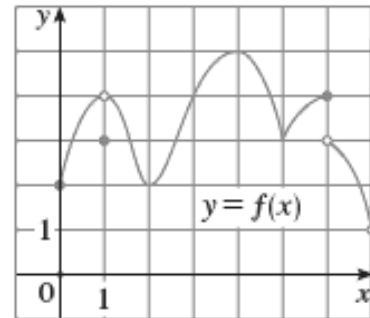


1. Use the graph to state the absolute and local maximum and minimum values of the function.



2. Sketch the graph  $f$  by hand and use your sketch to find the absolute and local maximum and minimum values of  $f$ .

$$f(t) = \cos(t), \quad -\frac{3\pi}{2} \leq t < \pi$$

3. Sketch a graph of a function  $f$  which is continuous on  $[1, 5]$ , which has an absolute maximum at 2, has an absolute minimum at 5, and for which 4 is a critical number but neither a local maximum nor local minimum.

4. Find the absolute maximum and minimum values of  $f$  on the given interval:

$$f(x) = 2x^3 - 3x^2 - 12x + 1, \quad [-2, 3]$$

5. Find the absolute maximum and minimum values of  $f$  on the given interval:

$$f(x) = x^{-2} \ln x, \quad \left[\frac{1}{2}, 4\right]$$

6. Find the critical numbers of the function:

$$h(p) = \frac{p-1}{p^2+4}$$