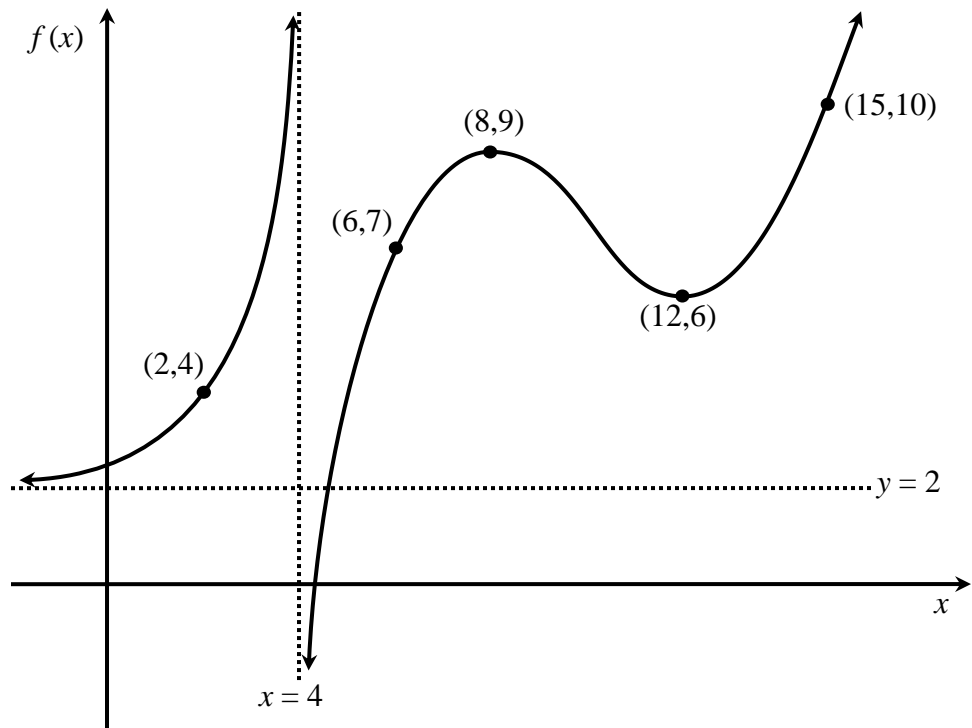


### Class Drill 14: Relative and Absolute Extrema

The *Extreme Value Theorem* says that if a function  $f$  is continuous on a closed interval  $[a,b]$ , then  $f$  will have both an absolute maximum and an absolute minimum on that interval. In this drill, you investigate what can happen when  $f$  is not continuous or the interval is not closed.

The graph of a function  $f$  is shown at right. Fill in the table below.



Interval	Relative Maxima in that interval	Relative Minima in that interval	Absolute Max in that interval	Absolute Min in that interval
$[6,15]$				
$(6,15)$				
$(8,15)$				
$[2,12]$				
$(2,12)$				
$(4,\infty)$				