Local (Relative) Extreme Values

Figure 4.5 shows a graph with five points where a function. We extreme values on its domain

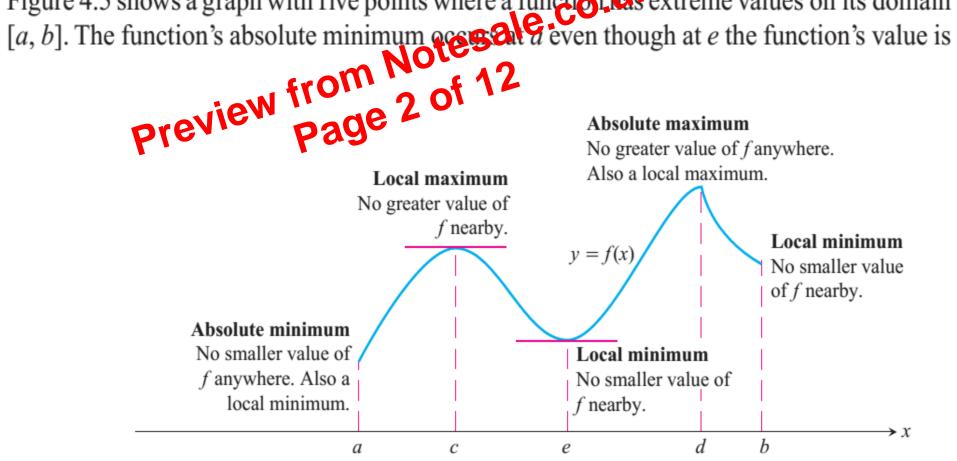


FIGURE 4.5 How to classify maxima and minima.

Finding Extrema

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The next theorem explans why we usually need to investigate only a few values to find a function's extrema.

The First Derivative Theorem for Local Extreme Values THEOREM 2

If f has a local maximum or minimum value at an interior point c of its domain, and if f' is defined at c, then

$$f'(c) = 0.$$