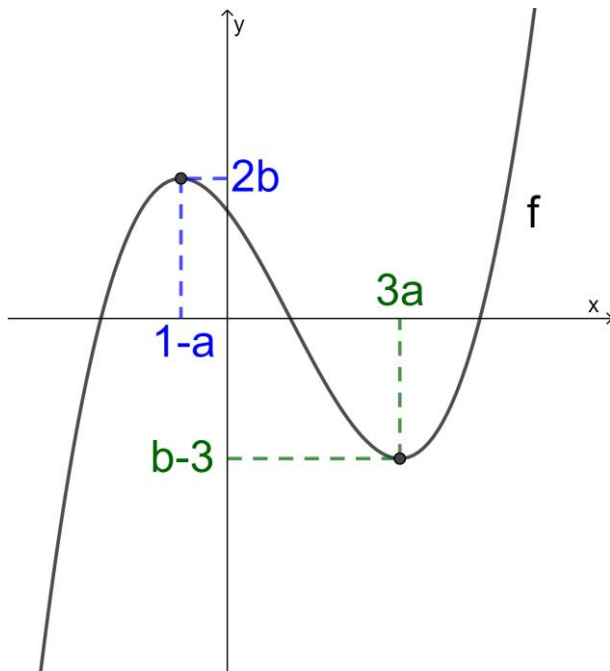


The graph of $f(x)$ has a local maxima at $(1 - a, 2b)$ and a local minima at $(3a, b - 3)$

a) Find the coordinates of the local maxima of $f(x + a) - 2b$

b) Find the coordinates of the local minima of $2f(3x)$



a) $f(x + a) - 2b$ is a translation $\begin{pmatrix} -a \\ -2b \end{pmatrix}$

We translate the graph

a units to the left and $2b$ units down

Local maxima becomes $(1 - 2a, 0)$

b) $2f(3x)$ is

- a stretch of scale factor $\frac{1}{3}$ parallel to the x axis,
and
- a stretch of scale factor 2 parallel to the y axis

Local minima becomes $(a, 2b - 6)$