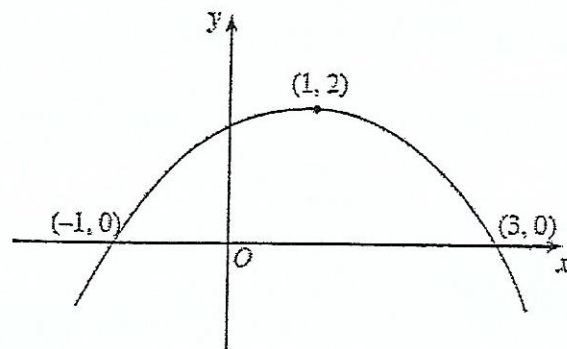


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The diagram shows the graph of $y = f(x)$. The graph passes through the points $(-1, 0)$ and $(3, 0)$ and has a maximum point at $(1, 2)$.

Sketch, on separate diagrams, the graphs of

(a) $y = f(x - 3)$,

[3]

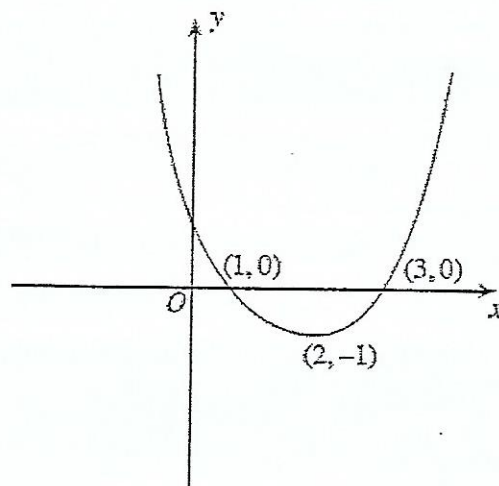
(b) $y = f\left(\frac{x}{2}\right)$,

[3]

showing the stationary points and the points of intersection of the graphs with the x-axis.

June 07

- 86 The diagram shows the graph of $y = f(x)$. The graph has a minimum point at $(2, -1)$ and intersects the x-axis at the points $(1, 0)$ and $(3, 0)$.



Sketch the following graphs, using a separate set of axes for each graph. In each case you should indicate the coordinates of the stationary point and the coordinates of the points of intersection of the graph with the x-axis.

(a) $y = 3f(x)$

(b) $y = f(x + 5)$

[3], [3]

Jan 08