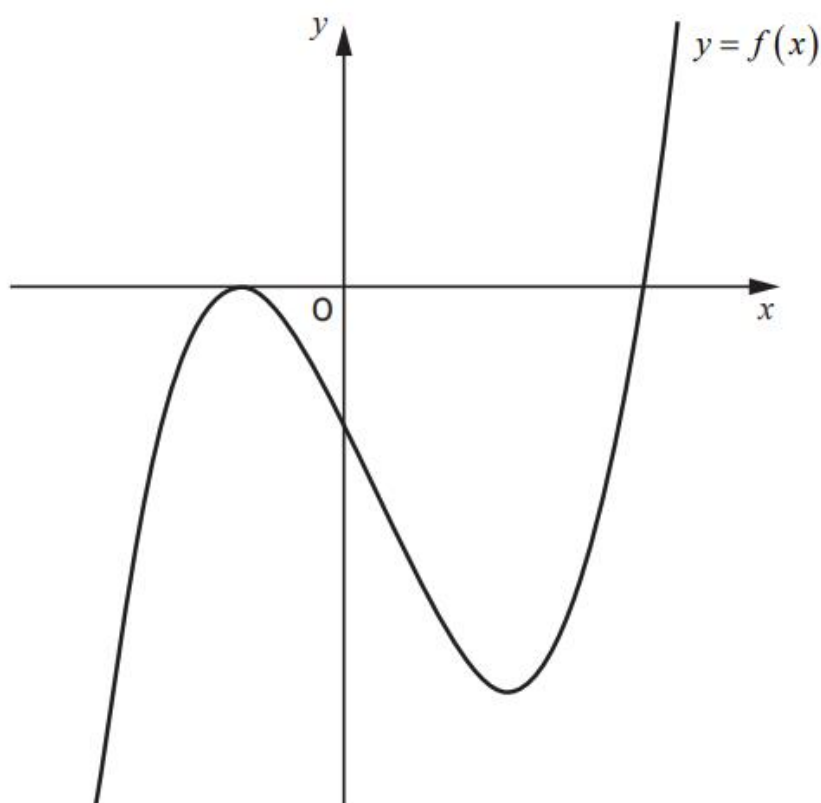




- (a) (i) Show that $(x+2)$ is a factor of $f(x) = x^3 - 2x^2 - 20x - 24$. 2
(ii) Hence, or otherwise, solve $f(x) = 0$. 3

The diagram shows the graph of $y = f(x)$.



- (b) The graph of $y = f(x-k)$, $k > 0$ has a stationary point at $(1, 0)$.
State the value of k . 1

Answers:

- (a) (i) Use -2 with synthetic division or evaluation to show that the remainder = 0
(ii) $x = -2$ or $x = 6$
(b) $k = 3$