

6 The equation of a curve is $y = x^3 + ax^2 + bx$, where a and b are constants.

(i) In the case where the curve has no stationary point, show that $a^2 < 3b$. [3]

(ii) In the case where $a = -6$ and $b = 9$, find the set of values of x for which y is a decreasing function of x . [3]