

7. The curve $y = ax^4 + bx^3 + 18x^2$ has a point of inflection at (1, 11).
- (a) Show that $2a + b + 6 = 0$. [2]
- (b) Find the values of the constants a and b and show that the curve has another point of inflection at (3, 27). [8]
- (c) Sketch the curve, identifying all the stationary points including their nature. [6]