16 The equation of a curve is

$$y = 6x^4 + 8x^3 - 21x^2 + 12x - 6.$$

(a) In this question you must show detailed reasoning.

Determine

- The coordinates of the stationary points on the curve.
- The nature of the stationary points on the curve.
- The x-coordinate of the non-stationary point of inflection on the curve. **[12]**

(b) On the axes in the Printed Answer Booklet, sketch the curve whose equation is

$$y = 6x^4 + 8x^3 - 21x^2 + 12x - 6.$$ **[3]**