5 A curve is defined implicitly by the equation $2x^2 + 3xy + y^2 + 2 = 0$.

(a) Show that $\dfrac{\mathrm{d}y}{\mathrm{d}x} = -\dfrac{4x + 3y}{3x + 2y}$. [3]

(b) **In this question you must show detailed reasoning.**

Find the coordinates of the stationary points of the curve. [4]