8 **In this question you must show detailed reasoning.**

(a) Use differentiation to find the coordinates of the stationary point on the curve with equation
$y = 2x^2 - 3x - 2$. **[3]**

(b) Use the second derivative to determine the nature of the stationary point. **[2]**

(c) Show by shading on a sketch the region defined by the inequality $y \geqslant 2x^2 - 3x - 2$, indicating
clearly whether the boundary is included or not. **[3]**

(d) Solve the inequality $2x^2 - 3x - 2 > 0$ using set notation for your answer. **[4]**