6 **(a)** Write $3x^2 + 15x - 20$ in the form $a(x+b)^2 + c$ where a, b and c are rational numbers. [4]

(b) State the minimum value of $3x^2 + 15x - 20$ and the value of x at which it occurs. [2]

(c) Use your answer to **part (a)** to solve the equation $3y^{\frac{2}{3}} + 15y^{\frac{1}{3}} - 20 = 0$, giving your answers correct to three significant figures. [3]

© UCLES 2022