10. Given that

\[ \frac{dy}{dx} = 6x^2 - 3x + 4, \text{ and} \]

\[ y = 14 \text{ when } x = 2, \]

express \( y \) in terms of \( x \).

Answer

\[ y = 2x^3 - \frac{3}{2} x^2 + 4x - 4 \]