

Quiz 11

Find a function $G(x)$ whose derivative is $3x^2 - 7x$ and whose value at $x = 1$ is 11.

Solution: Antidifferentiating gives

$$G(x) = \int 3x^2 - 7x dx = x^3 - 7x^2/2 + C,$$

so C must satisfy $G(1) = 1^3 - 7 \cdot 1/2 + C = 11$, which implies that $C = 13.5$. Thus, $G(x) = x^3 - 7x^2/2 + 13.5$.