Exercise 23

In Exercises 17–24, find the unknown if the solution of each equation is given:

$$\text{If } u(x) = 2 + 12x^2 \text{ is a solution of } u'(x) = f(x) + 20x - \int_0^x \int_0^1 (x-t)u(t)\,dt\,dt, \text{ find } f(x)$$