Homework 2

Due: 30 January 2019

1. Suppose h is a function satisfying

$$h''(x) = 0$$

and

$$h'(0) = h(0) = 1.$$

What is the function $h(x)$?

Hint: Recall that the fundamental theorem of calculus says that

$$\int_a^b f'(t)\,dt = f(b) - f(a)$$

for any differentiable function f.

2. If $f(x)$ is an even function, show that

$$F(x) = \int_0^x f(t)\,dt$$

is an odd function.