MATH 541, FALL 2023, HOMEWORK 10

Due Saturday, November 18, 2023 at 5pm Eastern time on Gradescope. Solve the following exercises:

Problem 1. Lawler, exercise 5.9. There is a mistake in the problem statement: the second condition on f should read
$$\mathbf{P}f(x) = f(x) + g(x), \qquad x \in S \setminus A.$$

Problem 2. Lawler, exercise 5.17.

Problem 3. Lawler, exercise 8.1. [We will use this in our study of Brownian motion, and it's a good warm-up for remembering how the normal distribution works.]