1 Solution to Problem 5.2 on Page 224:

We need to solve \( \int_{-\infty}^{\infty} f(x) = 1 \) to get the value of \( C = 1/4 \).
2 Solution to Problem 5.4 on Page 224:

(c) Suppose the lifetimes of the 6 devices are independently and identically distributed (i.i.d.), we have a binomial experiment.

Denote $Y$ are the number of the devices functioning for at least 15 hours, then $Y$ is a binomial random variable.

We’d like to compute $P(Y \geq 3)$, but not $P(Y = 3)$.

3 Solution to Problem 5.16 on Page 225:

Note that “it will take over 10 years before a year occurs having a rainfall of over 50 inches” means “in each of the next ten years the rainfall will be less than 50 inches”. There is no requirement for the 11th year in the future.

4 Solution to Problem 5.23 on Page 226:

Given the number 6 appears exactly 200 times, the probability of one of the remaining 800 rolls appears 5 is $1/5$, not $1/6$ any more.