Section 9/23

1 Question 4.7

A book has 20 chapters. In each chapter the number of misprints has the Poisson distribution with $\mu = 2$, independently of the misprints in other chapters.

    a) Find the chance that Chapter 1 has more than two misprints.

    b) Find the chance that the book has no misprints.

    c) Find the chance that two of the chapters have three misprints each.

2 Question 4.12

Each Cal Cookie contains random amounts of blue MMs and gold MMs. No other color is allowed.

In one cookie, let N_b be the number of blue MMs and N_g the number of gold MMs. Let $M = N_b + N_g$ be the total number of MMs in the cookie.

Suppose that N_b and N_g are independent and that each has the Poisson (4) distribution.

    a) Find $P(N_b = 3 | M = 10)$.

    b) Fill in the blanks with the name of a distribution and its parameters. Explain your answers.

Given M=10 , N_b has the ——————— distribution with parameters ——————— .

3 5.1

x	-2	-1	0	1
$P(X = x)$	0.2	0.25	0.35	0.2

Let X have the distribution displayed in the table above.

Find:

a) $E(X)$

b) $E(X - 1)$

c) $E(|X - 1|)$

d) $E((X - 1)^2)$