

## Assignment #3 (STA 5326)

**Reading:** Sections 3.4–3.5

**Exercises:** (in Chapter 3) 28, 36, 37, 38, 39

**Reading:** Sections 4.1–4.5

**Exercises:** (in Chapter 4) 1, 2, 4, 5, 9–11, 15, 19, 20, 22–24, 27, 30, 31, 32(a), 34, 41, 42, 43, 45, 47

---

**Note on 4.23(b):** This is messy. The important thing is to understand the method and general approach. The details are not that important here.

**Note on 4.27:** Do NOT use mgf's.

---

### Additional Parts for Exercise 4.4:

4(e) Find the conditional density of  $Y$  given  $X=x$ .

4(f) Find the conditional expected value of  $Y$  given  $X=x$ .

**Note:** Given part (b), part (d) is “old” material from Chapter 2.