

From the book: 6.6: 3, 6, 7, 13; 7.1: 2, 4

In addition:

1. Suppose that  $Y_1 = 8.3, Y_2 = 4.9, Y_3 = 2.6, Y_4 = 6.5$  is a random sample of size 4 from the 2 parameter uniform pdf:

$$f_Y(y; \theta_1, \theta_2) = \frac{1}{2\theta_2} \quad \theta_1 - \theta_2 \leq y \leq \theta_1 + \theta_2$$

Use MOM to calculate  $\hat{\theta}_1$  and  $\hat{\theta}_2$ .

2. Use MOM to find estimators for  $r$  and  $p$  in the negative binomial pdf:

$$p_X(k; r, p) = \binom{r+k-1}{k} p^r (1-p)^k, \quad k = 0, 1, \dots$$