

## Section 1.5 review

Work through Problem 1.9 step by step:

1. Compute  $\hat{\mu}$ .
2. Use  $\hat{\mu}$  to estimate  $\hat{\pi}_i$ ,  $i = 0, 1, 2, 3, 4$ . Also, compute  $\hat{P}(X \leq 4)$ .
3. Compute  $\hat{\pi}_i^* = \frac{\hat{\pi}_i}{\hat{P}(X \leq 4)}$ ,  $i = 0, 1, 2, 3, 4$ .
4. Compute estimated expected counts. Compare the estimated expected counts to the observed counts. Is there evidence of lack of fit?
5. Compute Pearson's  $X^2$  statistic. How many degrees of freedom should this statistic have?
6. Compute a p-value; what is your conclusion?