Additional Home Work Exercises for Section 6.1

1. Based upon the following information, choose the better of the two point estimates for the parameter θ and explain your reasoning.

$$E(\hat{\theta}_1) = \theta, \qquad V(\hat{\theta}_1) = 2.35$$
$$E(\hat{\theta}_2) = \theta, \qquad V(\hat{\theta}_2) = 1.86$$

2. Based upon the following information, choose the better of the two point estimates for the parameter θ and explain your reasoning.

$$E(\hat{\theta}_1) = \theta, \qquad V(\hat{\theta}_1) = 2.72$$
$$E(\hat{\theta}_2) = \frac{n-1}{n}\theta, \qquad V(\hat{\theta}_2) = 2.72$$

Answers are on the following page.

Answers

1. You would want to choose $\hat{\theta}_2$ because it has the smaller variance of the two.

2. You would want to choose $\hat{\theta}_1$ because it is unbiased.