1. A politician claims that she will receive 60% of the vote in an upcoming election. The results of a properly designed random sample of 100 voters showed that 50 of these sampled will vote for her. Is it likely that her assertion is correct ($H_0: P = .60$) at the 95% confidence level?

   (a) Compute the 95% confidence level.
   (b) Do hypothesis test at the 95% confidence level.

2. How many samples are required to get a ±4% maximum margin of error at the 95% confidence level?

3. The Science News reported that smoking boosts death risk for diabetics. And a study of the smoking rates for males and females diabetes in Kansas City obtained the following data.

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th># who smoke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>500</td>
<td>215</td>
</tr>
<tr>
<td>Female</td>
<td>500</td>
<td>170</td>
</tr>
</tbody>
</table>

   (a) Compute the interval estimate of the smoking rate difference between males and females at $\alpha = .01$.
   (b) Test the research hypothesis that the smoking rate is higher for males than for females ($H_A: P_m > P_f$) at $\alpha = .01$.

4. **Extra Credit 5 points: No extra credit for late submission.**
   Questions from the textbook

   - 20.29; 20.32 (a); 20.37 (a) (b); 20.42
   - 21.20; 21.21
   - Do Hypothesis test $H_0: P_{Hispanic} = P_{White}$ using 21.28 at $\alpha = .05$