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STATISTICS FOR ENGINEERS AND SCIENTISTS  
STAT 4073: FALL 2010

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Assignment: 3

Due date: September 17, 2010

Practice: Practice problems are *not* assigned to be turned in on the due date, but are rather important for building your skills in statistics.

§3.1 Page 168 1, 3, 5

§3.2 Page 176 1, 5

§3.3 Page 183 1, 5

§3.4 Page 192 1, 3, 5

Supps Page 194 1, 5

Assigned: Assigned problems are the ones I *will* collect on the due date. These problems are intended to summarize the material in the chapter(s).

§3.2 Page 176 7, 8

§3.3 Page 183 2, 12

§3.4 Page 192 2, 8

Supps Page 194 17, 22

Extension:

Frank D. Lucas (R-OK3) is the US Representative for Oklahoma's Third Congressional district, which includes all of Stillwater. Lucas has held this seat for 18 years. He faced no primary challenge from his fellow Republicans and will face Democrat Frankie Robbins in a rematch in November. Two years ago, Lucas beat Robbins 70% to 24%.

Recent polling (scant though it is) suggests that the results may be different. Rasmussen polled likely voters and concluded the support for Lucas in his district is  $80\% \pm 5\%$ . Gallup did likewise and found support at  $85\% \pm 3\%$ . A start-up polling firm, CEF, concluded that support for Lucas was at  $90\% \pm 8\%$ .

Your client has hired you to determine the actual support for Lucas (along with the errors). Do the calculations separately, **not** to be handed in. In a memo to your client, Sam Warde, summarize your technique (in a manner that is both readable and correct) and provide the best estimate of the support for Lucas in OK-3. Include both the estimate and the error range.