

Uncertain quantity	25% lower bound	75% upper bound
% black		
# eggs		
# airline deaths		
% girl births		
% freshmen in phys sciences		
# French speakers		
# Super Bowl watchers		
# babies born		
# abortions		
\$ median income		

Give 25% and 75% probability bounds for each of these quantities. You should specify the bounds so that, for an unknown quantity x , there should be a 50% chance that x is between your upper and lower bounds. Fill in all the blanks on the table. You will then be told the true values of these quantities.

1. The percentage of people in the United States who are “black” (from the 1990 Census).
2. The total egg production in the United States in 1965 (in number of eggs).
3. The number of airline passengers worldwide who died in plane crashes in 1980.
4. The percentage of babies born in the United States that are girls.
5. The percentage of entering college freshmen in the United States in 1990 whose probable field of study was physical sciences.
6. The number of native French speakers in Canada in 1981.
7. The number of people in the United States who watched the Super Bowl in 1995.
8. The number of babies born in the United States in 1992.
9. The number of abortions in the United States in 1992.
10. The median household income in the United States in 1996.

Fig. 17.6 Example of a handout we have used to demonstrate the difficulty of calibrating subjective probability intervals. Try this out yourself; the true values of the ten unknown quantities are on page 369. There is nothing special about this list; we encourage you to develop your own list that will interest your students.

questions except the probability of a girl birth, for which students tend to be slightly underconfident.)

After assessing the calibration of the students’ intervals (one could also separately check if the true parameter value is below the lower point of the specified interval approximately 25% of the time and above the upper point 25% of the time), we go on to explain an easy method for ensuring that your 50% intervals have perfect calibration. If you simply set half of your intervals to $(-\infty, \infty)$ and