# Homework Solutions 

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## Let's Do It! 8.1

(a)

| Number <br> of Women | Sample <br> Proportion $\hat{p}$ | Tally | Frequency | Proportion <br> of All Trials |
| :---: | :---: | :--- | :---: | :---: |
| 0 | 0.00 |  | 0 | 0.00 |
| 1 | 0.05 |  | 0 | 0.00 |
| 2 | 0.10 |  | 0 | 0.00 |
| 3 | 0.15 |  | 0 | 0.00 |
| 4 | 0.20 |  | 0 | 0.00 |
| 5 | 0.25 | 1 | 1 | 0.02 |
| 6 | 0.30 | 11 | 2 | 0.04 |
| 7 | 0.35 | 11 | 2 | 0.04 |
| 8 | 0.40 | 11111 | 6 | 0.12 |
| 9 | 0.45 | 111111 | 7 | 0.14 |
| 10 | 0.50 | 11111111 | 9 | 0.18 |
| 11 | 0.55 | 1111111 | 9 | 0.18 |
| 12 | 0.60 | 11111111 | 9 | 0.18 |
| 13 | 0.65 | 1111 | 4 | 0.08 |
| 14 | 0.70 |  | 0 | 0.00 |
| 15 | 0.75 | 1 | 1 | 0.02 |
| 16 | 0.80 |  | 0 | 0.00 |
| 17 | 0.85 |  | 0 | 0.00 |
| 18 | 0.90 |  | 0 | 0.00 |
| 19 | 0.95 |  | 0 | 0.00 |
| 20 | 1.00 |  | 0 | 0.00 |

(Your results may differ if you used a different seed.)
(b) $0.50,0.55$, and 0.60 where the most common. (Your results may differ if you used a different seed.)
(c) $0 \%, 18 \%, 0 \%$, respectively. (Your results may differ if you used a different seed.)
(d) It is very roughly symmetric and it is unimodal. It at first appears to be more spread out, but that is only because there are more possible values. If you check the frequency of 0.25 and 0.75 , they are much lower than when $n=4$. Therefore, the distribution, drawn to the same scale, is much more tightly clustered about the center of 0.50 .

