Name: $\qquad$
$\qquad$

1. Experimental or Theoretical probability? John flips a fair coin 60 times and get heads 33 times. Based on his results, the $\qquad$ probability of getting heads when flipping a fair coin is $33 / 60$ or 0.55 .

A pet store contains $\mathbf{3 5}$ light green parakeets ( $\mathbf{1 4}$ females and $\mathbf{2 1}$ males) and 44 sky blue parakeets ( $\mathbf{2 8}$ females and $\mathbf{1 6}$ males). Arrange this information in a two-way table.

|  | Male | Female | Total |
| :--- | :---: | :---: | :---: |
| Light Green Parakeet | 21 | 14 | 35 |
| Sky Blue Parakeet | 16 | 28 | 44 |
| Total | 37 | 42 | 79 |

You randomly choose one of the parakeets. (Give answers as the fractions; you do not need to reduce.)
2. What is the probability that it is a Light Green Parakeet?
3. What is the probability that the randomly chosen parakeet is both green and male?
4. What is the probability that the randomly chosen parakeet is female, given it is green?
5. Find $P($ Male)
6. Find $P($ Male and Sky Blue)
7. Find P(Male or Sky Blue)
8. Find P(Male \| Sky Blue)

## A bag contains 5 blue marbles, 7 green marbles, and 3 red marbles.

9. You randomly select one marble. What is the probability that it is blue or green?
10. Suppose you select 2 marbles. You randomly pull out a marble, replace it, then pull out a second marble. What is the probability that you selected 2 red marbles?
11. You randomly pull out 2 marbles, without replacing the first. What is the probability that you get 2 red marbles?
