CP Statistics Probability Review 2 Name _____ Period _____

Use the following table of data for questions 1-5:

Hand/Gender	Male	Female	Totals
Right	39	51	90
Left	7	3	10
Totals	46	54	100

The data above comes from a random selection of 100 Australian high school students. If one student is selected at random from this group, what is the probability that the student is…

1. left-handed? _____
2. female? _____
3. left-handed or female? _____
4. left-handed and female? _____
5. not female or left-handed? _____

There is a .65 probability that the Aardvarks will beat the Baboons in any baseball game. If the two teams play 3 games, what is the probability that…

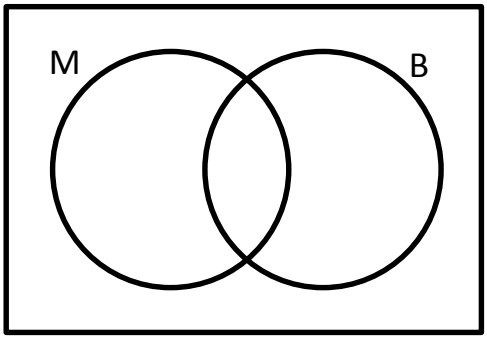
6. the Aardvarks win all 3 games?
7. the Baboons win all 3 games?
8. the Aardvarks win only the first game?

Assume that the events A and B are disjoint and independent and P(A) = .36 and P(B) = .49.

9. What is P(A or B)?
10. What is P(A and B)?

There are 58 people at a meeting. Of these people, 26 own a motorcycle and 31 own a boat. There are 12 people who own both a motorcycle and a boat. Define event M = person own's a motorcycle and event B = person own's a boat.

11. Complete the Venn diagram below.



Using the Venn diagram to find the probability that a person at this meeting owns…

12. a boat or a motorcycle.
13. only a boat.
14. neither a boat or motorcycle.
15. a motorcycle given that they own a boat.

Use the table for hand and gender from exercises 1-5 to find the probability that a student selected from this group is…

16. female given that they are left-handed.
17. left-handed given that they are female.

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Use a tree diagram to analyze each of the following scenarios. Then use the tree diagram to answer the questions posed.

18. Suppose the probability that a child born to a particular couple has blue eyes is 0.25. We may assume that eye colors of the children are independent. If this couple has two children, find the probability that…
    a. neither of the children has blue eyes.
    b. only 1 of the children has blue eyes.
    c. both of the children have blue eyes.

19. Suppose that a drawer full of socks contains 6 blue and 10 black socks. You will reach in the drawer (without looking) and grab two socks, one at a time (without replacement).
    a. What is the probability that the two socks are the same color?
    b. What is the probability that the two socks are different colors?