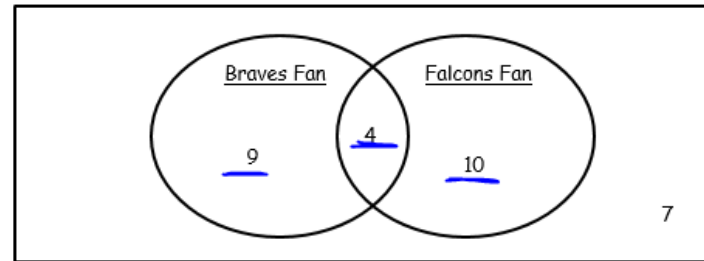


Part 1 Students in Mrs. Deliciousham's Homeroom
(Leave answers as simplified fraction or a percent)



1. Analyze the data in the Venn diagram and list five facts about Mrs. Deliciousham's homeroom.

2. If a student is selected at random from Mrs. Deliciousham's homeroom, what is the probability that the student is a Braves fan AND a Falcons fan? Explain your reasoning.

$$\frac{4}{30} = 13.3\% = \frac{2}{15}$$

3. If a student is selected at random from Mrs. Deliciousham's homeroom, what is the probability that the student is NOT a Braves fan or a Falcons fan? Explain your reasoning.

$$\frac{7}{30} \quad 23.3\%$$

4. Find the probability that someone is Braves fan or a Falcons fan. (Hint: remember than someone who likes both would still count) Explain your reasoning.

$$\frac{23}{30} \quad 76.7\%$$

5. Find the probability that someone is a braves fan GIVEN they are NOT a falcons fan. Explain your reasoning.

$$\frac{9}{16} \quad 56.3\%$$

OF PEOPLE WHO ARE NOT FALCONS FAN

CONDITIONAL PROBABILITY CHANGES THE DENOMINATOR

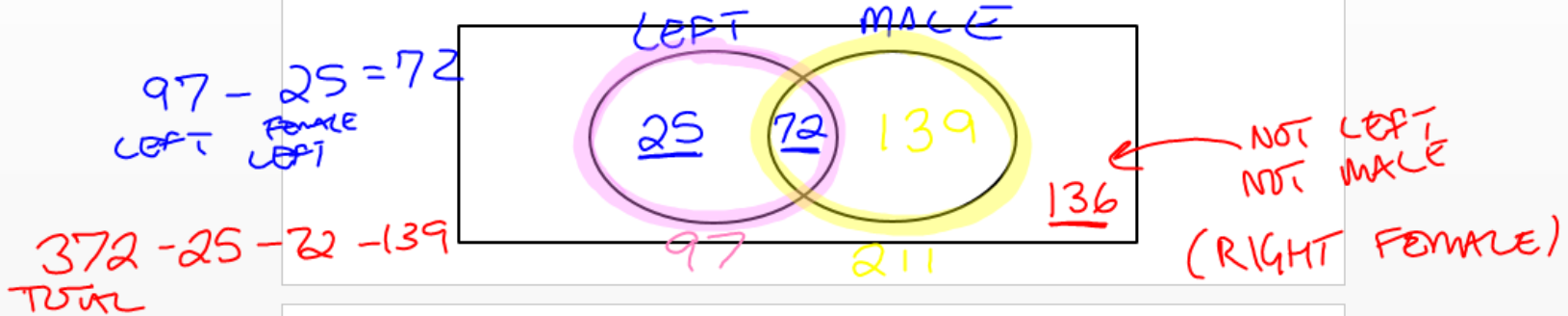
Part 2

Part 2

372 professional golfers (male and female) were surveyed. The survey results indicated the following:

- 211 are male, 97 golfers swing the club left-handed, and 25 of the left-handed golfers are female.

Draw a Venn diagram and label the data.



6. What is the probability that a golfer selected at random is male? Female? Explain your reasoning.

MALE $\frac{211}{372} = 56.7\%$ FEMALE $\frac{161}{372} = 43.3\%$

7. What is the probability that a golfer is right handed? Explain your reasoning

$\frac{139 + 136}{372} = 73.9\%$

8. Find the probability P(Female or Left-Handed). Explain your reasoning.

$\frac{25 + 136 + 72}{372} = 62.6\%$
FEMALES LEFT

9. What is the probability that a golfer is a male GIVEN they are right handed? Explain your reasoning.

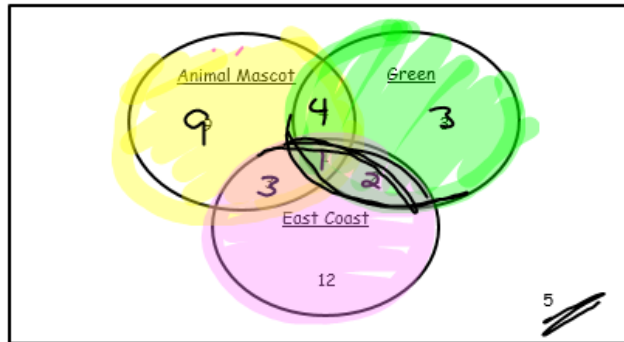
$\frac{139}{275} = 50.5\%$
ONLY RIGHT HANDED

10. Write your own probability question about the above ~~venn~~ diagram and answer it.

6. What is the probability that a golfer selected at random is male? Female? Explain your reasoning.
7. What is the probability that a golfer is right handed? Explain your reasoning
8. Find the probability $P(\text{Female or Left-Handed})$. Explain your reasoning.
9. What is the probability that a golfer is a male GIVEN they are right handed? Explain your reasoning.
10. Write your own probability question about the above venn diagram and answer it.

Triple Venn Diagrams

Example: The following is a Venn diagram representing the American Whiffle Ball League (AWBL) teams that have an animal mascot, green in their team colors, and location on the east coast.



11. How many total teams are represented in the Venn Diagram. How did you determine this?
 $9 + 4 + 3 + 3 + 1 + 2 + 12 + 5 = 39$
12. How many AWBL teams have an animal mascot, the color green, and are located on the east coast? Explain your reasoning. What would be a good name for this team? 1

13. How many AWBL teams have the color green in their team colors and are located on the east coast? Explain your reasoning.

$\frac{3}{39}$ 7.7%

14. From the above Venn diagram, what is the probability of randomly selecting a team with no animal mascot, no color green, and not located on the east coast? Explain your reasoning.

$\frac{5}{39}$ 12.8%

15. From the above Venn diagram, what is the probability of randomly selecting a team with green colors and an animal mascot, but not located on the east coast? Explain your reasoning.

$\frac{4}{39}$ 10.3%

16. From the above Venn Diagram, what is the probability that a randomly selected team is from the East Coast but does not have the color green?

$\frac{12}{39}$ 30.8%

17. Write your own probability question about the above venn diagram and answer it.

EXTENSION: Survey the class about 3 things and create a triple venn diagram. Be creative when choosing the things to ask, remember they do not necessarily have to be directly related to each other. Collect your data and show me, then you will draw a final version of your venn diagram on a piece of colored paper.

ATLANTA GREEN LIZARDS