

Venn Diagrams WS

Name Fuston

1) Mr. Mangione, the Director of Human Resources at Ace Chemical Industries, constructed a diagram to illustrate the skills of applicants for positions in the office of his company.

a. How many applicants possess word processing skills?

$$30 + 10 + 5 + 10 = 55$$

b. How many applicants possess only word processing skills?

30

c. How many applicants possess only word processing and marketing skills?

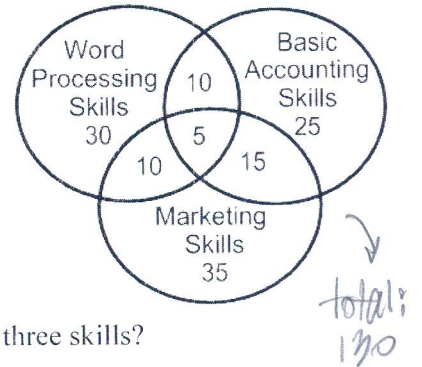
10

d. How many applicants possess word processing, basic accounting, and marketing skills?

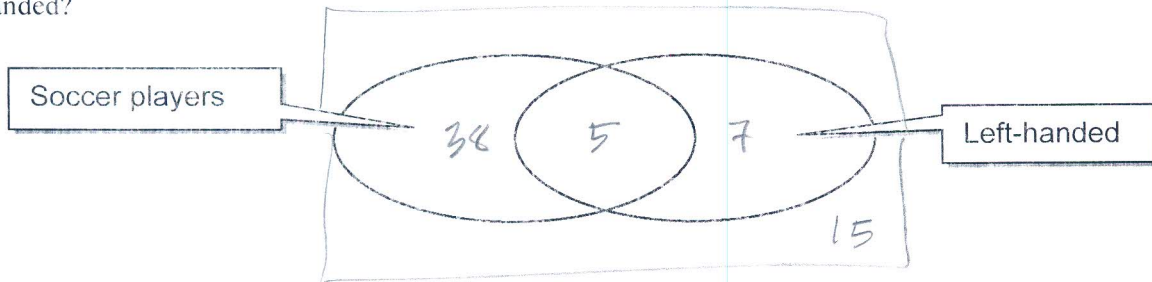
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e. What is the probability that a randomly selected candidate would possess all three skills?

$$5/130$$

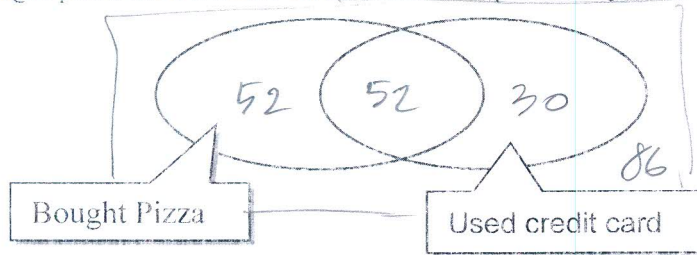


2) Of the 65 students going on the soccer trip, 43 are players and 12 are left-handed. Only 5 of the left-handed students are soccer players. What is the probability that one of the students on the trip is a soccer player or is left-handed?



$$\frac{50}{65} = \frac{10}{13}$$

3) Of the 220 people who came into the Italian deli on Friday, 104 bought pizza and 82 used a credit card. Half of the people who bought pizza used a credit card. What is the probability that a customer bought pizza or used a credit card?



$$\frac{134}{220} = \frac{67}{110}$$

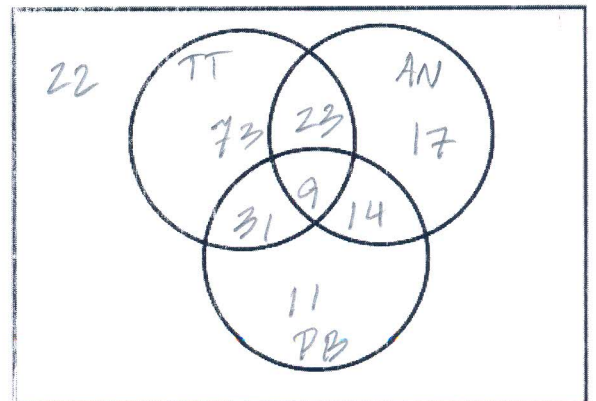
4) A study was made of 200 students to determine what TV shows they watch.

- 22 students don't watch these cartoons.
- 9 students watch all three cartoons.
- 73 students watch only Tiny Toons.
- 136 students watch Tiny Toons.
- 14 students watch only Animaniacs and Pinky & the Brain.
- 31 students watch only Tiny Toons and Pinky & the Brain.
- 63 students watch Animaniacs.
- 135 students do not watch Pinky & the Brain.

(65 do watch)

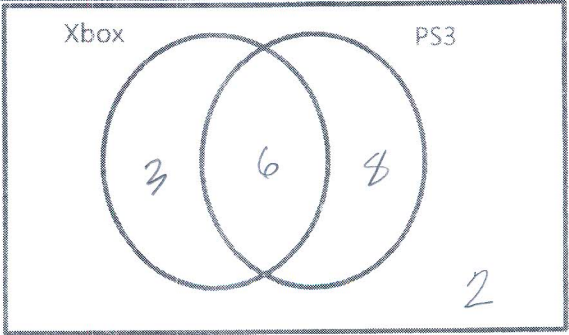
What percent of the students watch only Animaniacs?

$$\frac{17}{200} = 8.5\%$$



When making your own Venn-Diagram, try to **start in the MIDDLE!!!**

Out of 19 students surveyed, 2 students did not own an Xbox or PS3, 6 students owned a PS3 and an Xbox, and 14 students owned a PS3.



19

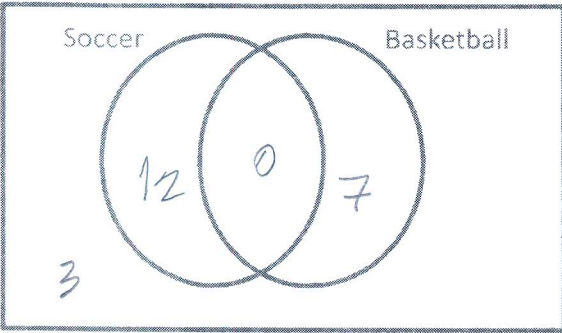
How many students owned...

15. An Xbox 9

16. Only a PS3 8

17. Both consoles 6

Out of 22 students surveyed, 3 did not like soccer or basketball. 7 said they only like basketball. None said they like both.



22

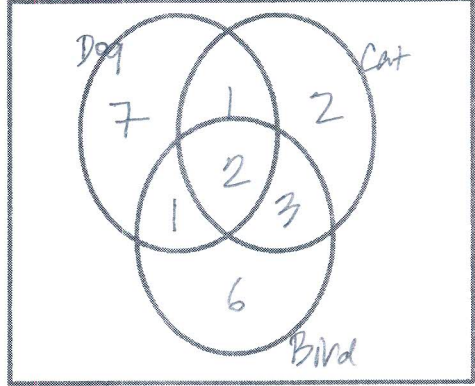
How many students liked...

18) Only soccer 12

19) Soccer or basketball 19

20) Soccer and basketball 0

Teresa asked students in her math class whether they owned a dog, cat, or bird. Of the 35 students surveyed, 11 owned a dog, 8 owned a cat, 12 owned a bird. 3 owned a cat and dog. 5 owned a cat and bird and 3 owned a bird and dog. 2 students owned all three animals. How many students owned:



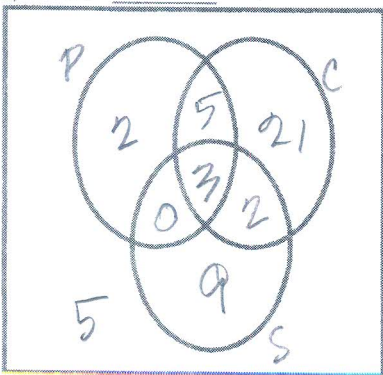
35

21) Only a dog? 7

22) Dog and cat, but not a bird? 1

23) None 13

Matthew was ordering pizza for his 47 friends. He took a survey to see who like pepperoni, cheese, and sausage. 3 people said they liked all three, 5 said cheese and sausage, 8 said pepperoni and cheese, and 3 said pepperoni and sausage. 5 people did not choose any of the three. 10 total like pepperoni and 14 liked sausage. How many liked:



47

24) Cheese 31

25) Just Cheese 21

26) Just sausage 9