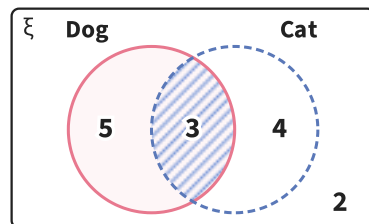


Venn Diagrams and Probability

ANSWERS

1

One person is picked at random.
Find P(both).

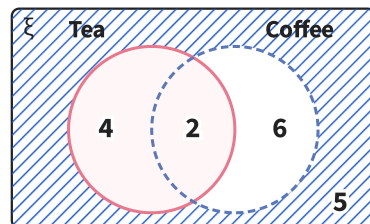


$$\text{All } 5 + 3 + 4 + 2 = 14$$

$$P(\text{both}) = \frac{3}{14} \begin{array}{l} \text{in} \\ \text{the middle} \\ \text{all} \end{array}$$

2

One person is picked at random.
Find P(neither).

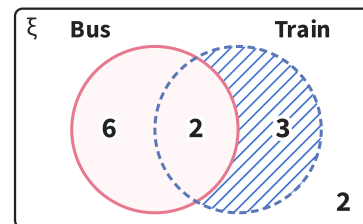


$$\text{All } 4 + 2 + 6 + 5 = 17$$

$$P(\text{neither}) = \frac{5}{17} \begin{array}{l} \text{outside} \\ \text{the circles} \\ \text{all} \end{array}$$

3

One person is picked at random.
Find P(train only).

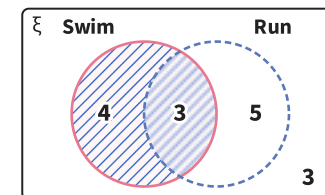


$$\text{All } 6 + 2 + 3 + 2 = 13$$

$$P(\text{train only}) = \frac{3}{13} \begin{array}{l} \text{only in Train} \\ \text{all} \end{array}$$

4

One student is picked at random.
Find P(swim).



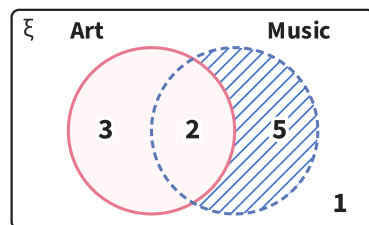
$$\text{All } 4 + 3 + 5 + 3 = 15$$

$$\text{Swim } 4 + 3 = 7$$

$$P(\text{swim}) = \frac{7}{15} \begin{array}{l} \text{in the} \\ \text{Swim circle} \\ \text{all} \end{array}$$

5

One student is picked at random.
Find P(music only).

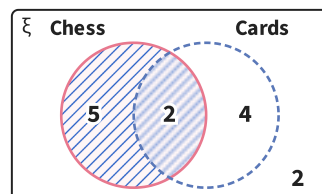


$$\text{All } 3 + 2 + 5 + 1 = 11$$

$$P(\text{music only}) = \frac{5}{11} \begin{array}{l} \text{only} \\ \text{in Music} \\ \text{all} \end{array}$$

6

One person is picked at random.
Find P(chess).



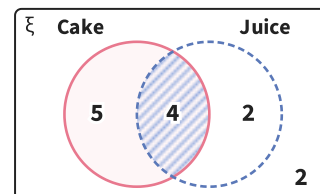
$$\text{All } 5 + 2 + 4 + 2 = 13$$

$$\text{Chess } 5 + 2 = 7$$

$$P(\text{chess}) = \frac{7}{13} \begin{array}{l} \text{in the} \\ \text{Chess circle} \\ \text{all} \end{array}$$

7

13 children are at a party.
One is picked at random.
Find the probability that they had
cake and juice.

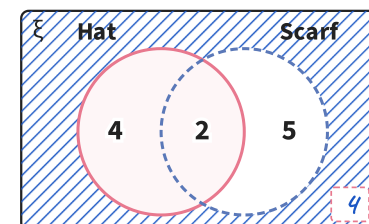


$$\text{All } 5 + 4 + 2 + 2 = 13$$

$$P(\text{both}) = \frac{4}{13} \begin{array}{l} \text{in the middle} \\ \text{all} \end{array}$$

8

$P(\text{neither}) = \frac{4}{15}$.
Write the missing number.



$$\text{All } 4 + 2 + 5 + 4 = 15$$

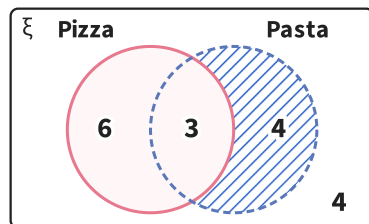
$$P(\text{neither}) = \frac{4}{15} \begin{array}{l} \text{outside} \\ \text{the circles} \\ \text{all} \end{array}$$

Venn Diagrams and Probability *further practice*

ANSWERS

9

One person is picked at random.
Find $P(\text{pasta only})$.

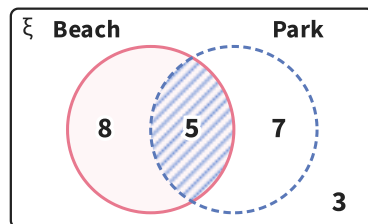


$$\text{All } 6 + 3 + 4 + 4 = 17$$

$$P(\text{pasta only}) = \frac{4}{17} \text{ only in Pasta}$$

10

One person is picked at random.
Find $P(\text{both})$.

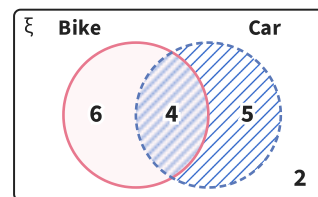


$$\text{All } 8 + 5 + 7 + 3 = 23$$

$$P(\text{both}) = \frac{5}{23} \text{ in the middle}$$

11

One person is picked at random.
Find $P(\text{car})$.



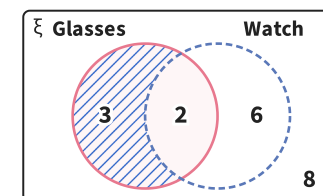
$$\text{All } 6 + 4 + 5 + 2 = 17$$

$$\text{Car } 4 + 5 = 9$$

$$P(\text{car}) = \frac{9}{17} \text{ in the Car circle}$$

12

One person is picked at random.
Find the probability that they wear glasses but no watch.

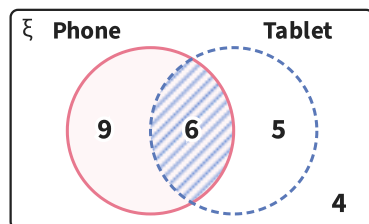


$$\text{All } 3 + 2 + 6 + 8 = 19$$

$$P(\text{glasses only}) = \frac{3}{19} \text{ only in Glasses}$$

13

One student is picked at random.
Find $P(\text{both})$.



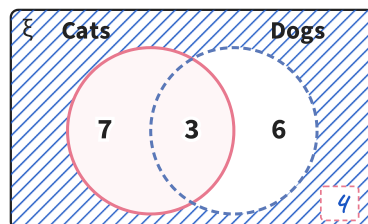
$$\text{All: } 9 + 6 + 5 + 4 = 24$$

$$\text{Both: } 6$$

$$\text{Answer } \frac{6}{24}$$

14

There are 20 people.
Write the missing number.
Find $P(\text{neither})$.



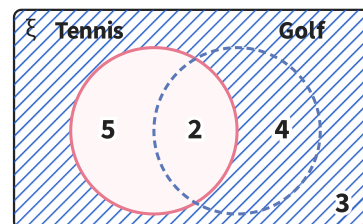
$$20 - 7 - 3 - 6 = 4$$

$$\text{Neither: } 4 \text{ out of } 20$$

$$\text{Answer } \frac{4}{20}$$

15

One person is picked at random.
Find $P(\text{not tennis})$.



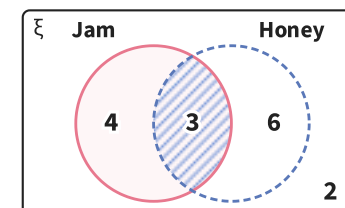
$$\text{All: } 5 + 2 + 4 + 3 = 14$$

$$\text{Not tennis: } 4 + 3 = 7$$

$$\text{Answer } \frac{7}{14}$$

16

Ali says $P(\text{both}) = \frac{3}{13}$. What has Ali done wrong?



The bottom should be

15. Ali left out the 2 outside.

$$\text{Right answer } \frac{3}{15}$$