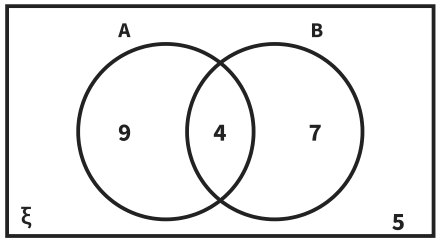
Probability from Venn Diagrams

1

The Venn diagram shows how many are in each region. One is picked at random. Find P(A).

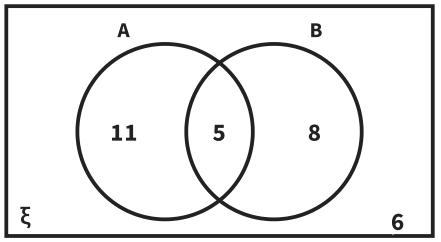


P(A) = $\frac{\text{the region you want}}{\text{the whole box}}$

Answer _____

2

The Venn diagram shows how many are in each region. One is picked at random. Find P(A ∩ B).

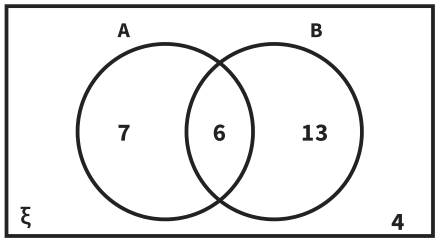


P(A ∩ B) = $\frac{\text{the region you want}}{\text{the whole box}} = \frac{\quad}{30}$

Answer _____

3

The Venn diagram shows how many are in each region. One is picked at random. Find P(B).

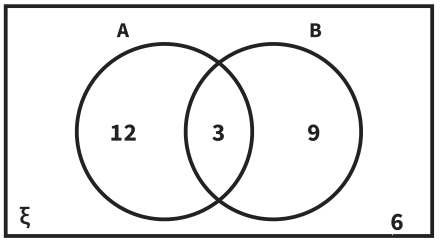


P(B) = $\frac{\text{the region you want}}{\text{the whole box}} = \frac{\quad}{30}$

Answer _____

4

The Venn diagram shows how many are in each region. One is picked at random. Find P(A ∪ B).

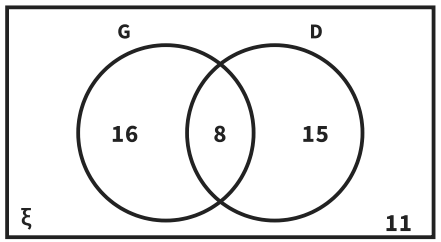


P(A ∪ B) = $\frac{\text{the region you want}}{\text{the whole box}} = \frac{\quad}{30}$

Answer _____

5

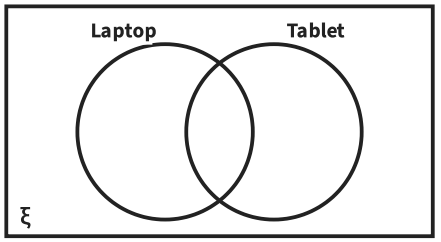
ξ = 50 people. G = people who play guitar. D = people who play drums. One person is picked at random. Find P(G′).



Answer _____

6

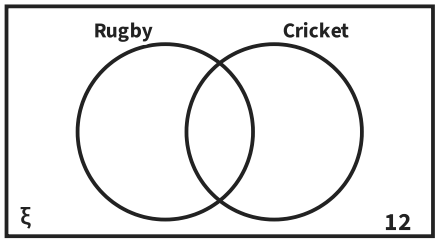
40 students: 22 have a laptop, 18 have a tablet and 7 have both.
Complete the Venn diagram. A student is picked at random. Find the probability they have neither.



Answer _____

7

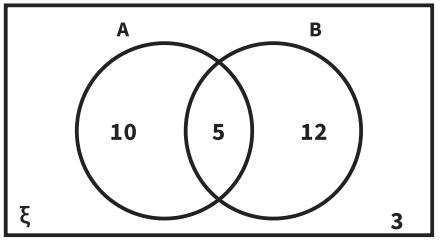
60 people: 35 like rugby, 28 like cricket and 12 like neither.
Complete the Venn diagram. A person is picked at random. Find the probability they like both.



Answer _____

8

Ali uses this Venn diagram and says P(A) = $\frac{10}{30}$. Explain Ali's mistake.
Then find P(A).

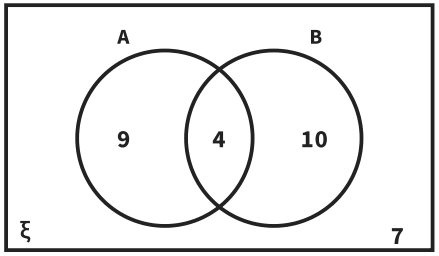


P(A) = _____

Probability from Venn Diagrams *further practice*

9

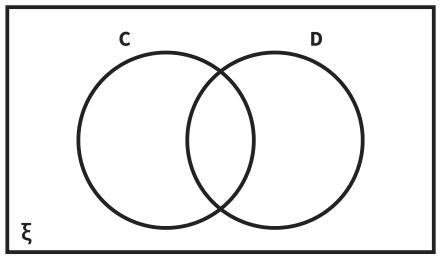
The Venn diagram shows how many are in each region. One is picked at random. Find P(B′).



Answer _____

10

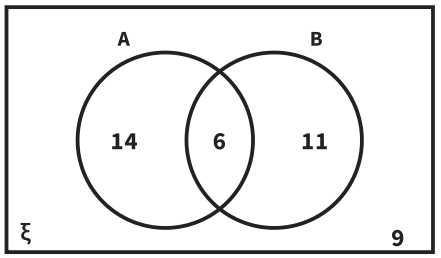
ξ = 50 people. C = people with a cat. D = people with a dog. 28 have a cat, 19 have a dog and 9 have both. One person is picked at random. Find P(C ∪ D).



Answer _____

11

One is picked at random. Is it more likely to be in A or in B? Show how you know.

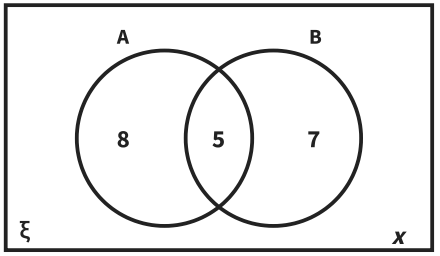


Answer _____

12

One is picked at random. P(A ∪ B) = $\frac{4}{5}$.

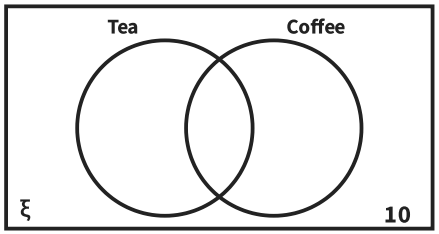
Find *x*.



Answer _____

13

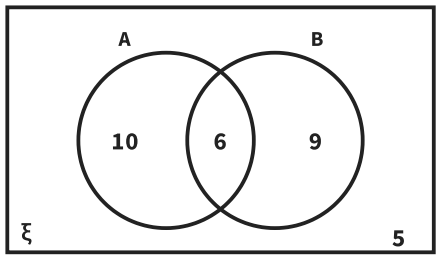
80 people: 45 drink tea, 38 drink coffee and 10 drink neither. One person is picked at random. Find the probability they drink exactly one of them.



Answer _____

14

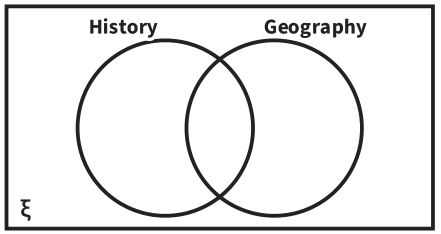
Higher. One is picked at random. It is in B. Find the probability it is also in A, P(A | B).



Answer _____

15

Higher. 60 students: 25 study history, 30 study geography and 8 study both. A geography student is picked at random. Find the probability they also study history.

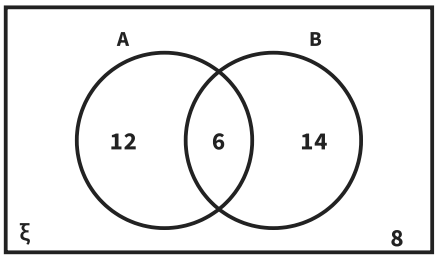


Answer _____

16

Jo says P(A ∪ B) = $\frac{18}{40} + \frac{20}{40} = \frac{38}{40}$.

Is Jo right? Explain.



Answer _____