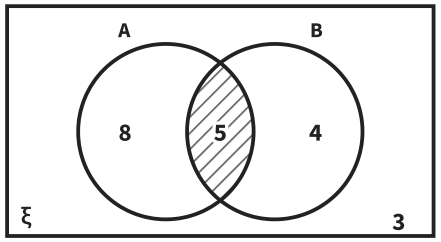
Venn Diagrams: Set Notation

1

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

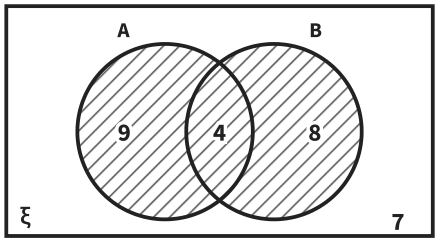


P(A ∩ B) = ____ in the shaded region / 20 in the whole box

Answer _____

2

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

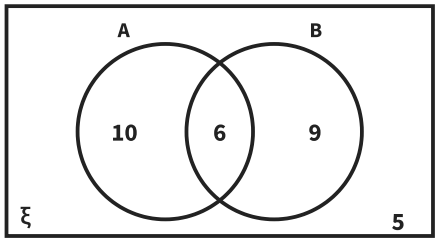


P(A ∪ B) = ____ in the shaded region / ____ in the whole box

Answer _____

3

The Venn diagram shows the number in each region. Shade A′ on the diagram. One is picked at random. Find P(A′).

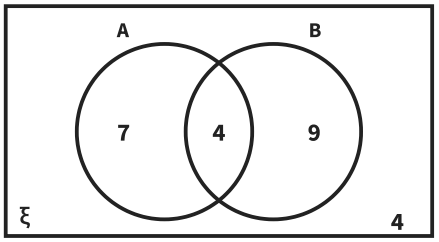


P(A′) = ____ in the shaded region / ____ in the whole box

Answer _____

4

The Venn diagram shows the number in each region. Shade B′ on the diagram. One is picked at random. Find P(B′).

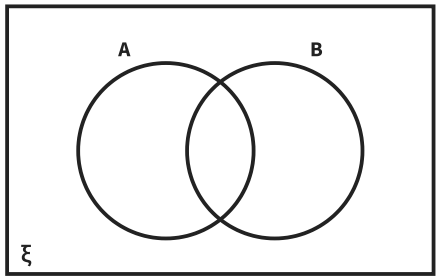


P(B′) = ____ in the shaded region / ____ in the whole box

Answer _____

5

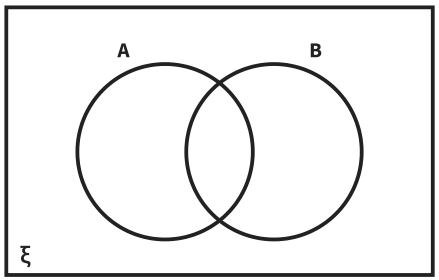
ξ = whole numbers from 1 to 10.
A = odd numbers. B = factors of 10.
Write each number in the Venn diagram.
List the numbers in A ∩ B.



A ∩ B = _____

6

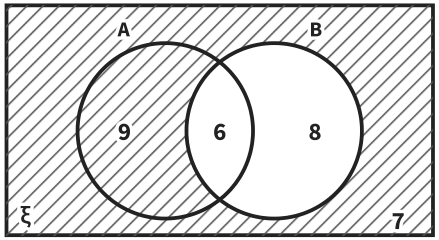
ξ = whole numbers from 1 to 12.
A = multiples of 4. B = factors of 12.
Write each number in the Venn diagram.
One number is picked at random.
Find P(A′).



P(A′) = _____

7

Write the set notation for the shaded region. One is picked at random. Find the probability that it is in the shaded region.

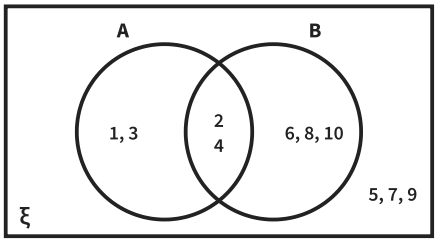


Notation _____

Answer _____

8

ξ = whole numbers from 1 to 10.
A = numbers less than 5.
B = even numbers. Ella says B′ = {1, 3}.
Explain Ella's mistake.
Then write B′ correctly.

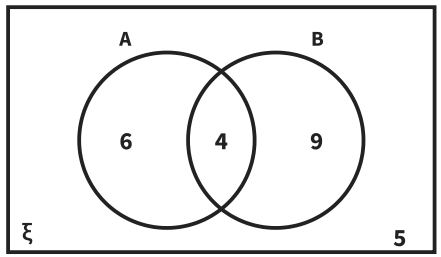


B′ = _____

Venn Diagrams: Set Notation *further practice*

9

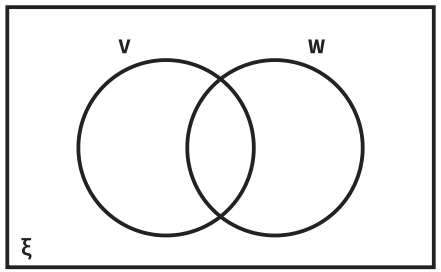
ξ = 24 students. A = students who play an instrument. B = students who sing. One student is picked at random. Find P(A′).



Answer _____

10

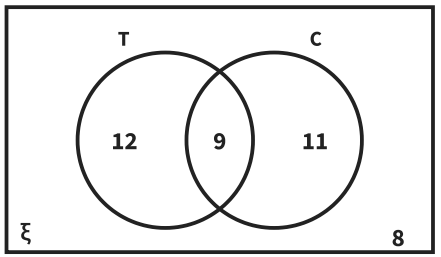
ξ = the letters a to f. V = vowels. W = the letters in the word bed. Write each letter in the Venn diagram. One letter is picked at random. Find P(V ∪ W).



Answer _____

11

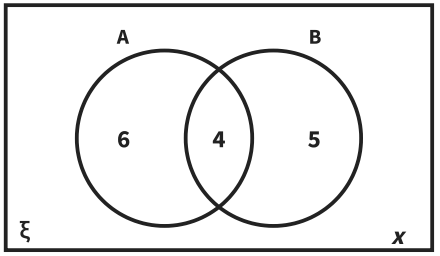
ξ = 40 people in a café. T = people who ordered tea. C = people who ordered cake. One person is picked at random. Find P(C′).



Answer _____

12

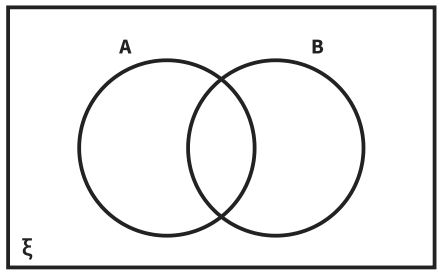
The Venn diagram shows the number in each region. One is picked at random. P(A ∪ B) = $\frac{3}{4}$. Find *x*.



Answer _____

13

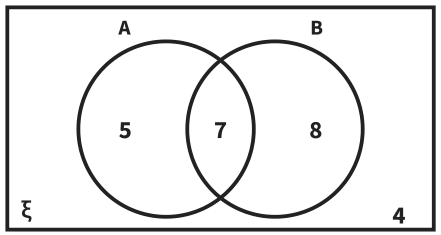
ξ = whole numbers from 1 to 10. A = square numbers. B = even numbers. Write each number in the Venn diagram. One number is picked at random. Find P(A ∩ B).



Answer _____

14

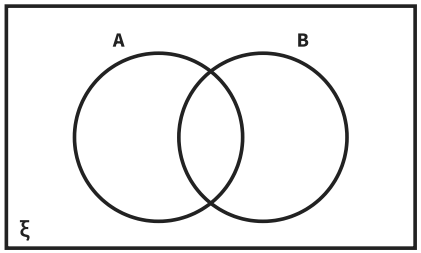
ξ = the members of a book club. A = members who read crime. B = members who read poetry. One member is picked at random. Is the member more likely to be in A ∩ B or in B′? Show how you know.



Answer _____

15

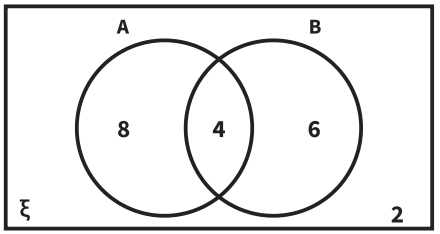
ξ = whole numbers from 1 to 10. A = {1, 3, 6, 8}. A ∩ B = {3, 6}. A ∪ B = {1, 3, 6, 8, 9}. Complete the Venn diagram. One number is picked at random. Find P(B′).



Answer _____

16

Kofi says P(A ∪ B) = $\frac{12}{20} + \frac{10}{20} = \frac{22}{20}$. Is Kofi right? Explain.



Answer _____