

Venn Diagrams: Set Notation

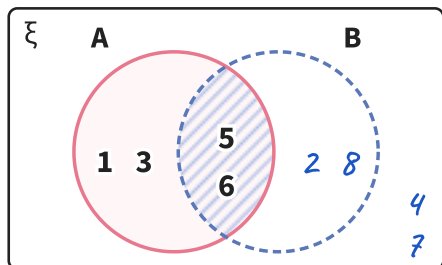
ANSWERS

1

Fill in the Venn diagram. List $A \cap B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8\}$

$A = \{1, 3, 5, 6\}$ $B = \{2, 5, 6, 8\}$



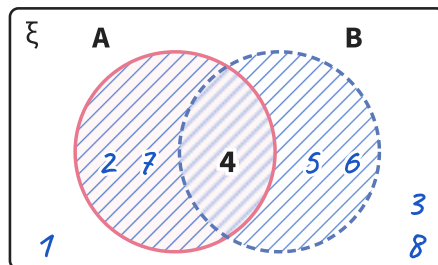
$A \cap B$
in A and B = { 5, 6 }

2

Fill in the Venn diagram. List $A \cup B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8\}$

$A = \{2, 4, 7\}$ $B = \{4, 5, 6\}$



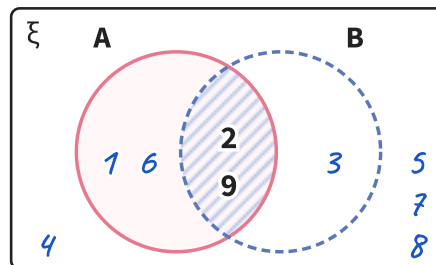
$A \cup B$
in A or B or both = { 2, 4, 5, 6, 7 }

3

Fill in the Venn diagram. List $A \cap B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$A = \{1, 2, 6, 9\}$ $B = \{2, 3, 9\}$



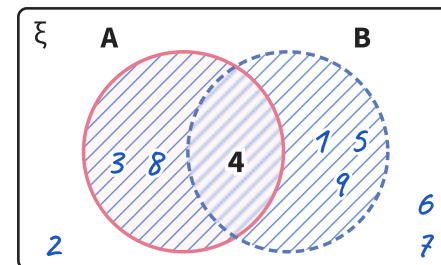
$A \cap B$
in A and B = { 2, 9 }

4

Fill in the Venn diagram. List $A \cup B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$A = \{3, 4, 8\}$ $B = \{1, 4, 5, 9\}$



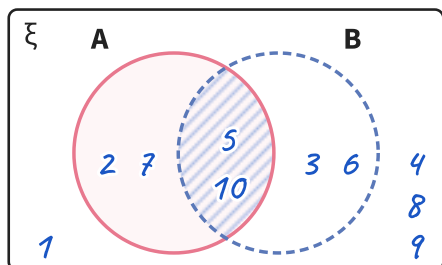
$A \cup B$
in A or B or both = { 1, 3, 4, 5, 8, 9 }

5

Fill in the Venn diagram. List $A \cap B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \{2, 5, 7, 10\}$ $B = \{3, 5, 6, 10\}$



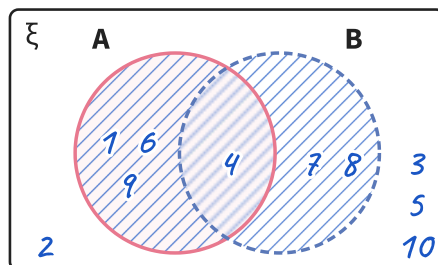
$A \cap B$
in A and B = { 5, 10 }

6

Fill in the Venn diagram. List $A \cup B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \{1, 4, 6, 9\}$ $B = \{4, 7, 8\}$

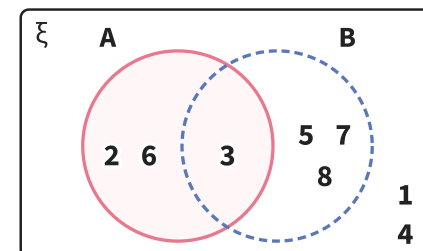


$A \cup B$
in A or B or both = { 1, 4, 6, 7, 8, 9 }

7

Use the Venn diagram. List set A and set B.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8\}$



A
the whole circle A = { 2, 3, 6 }

B
the whole circle B = { 3, 5, 7, 8 }

8

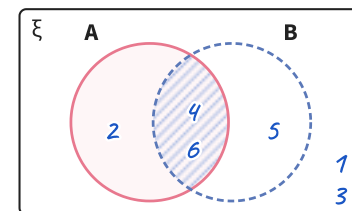
The numbers on a dice:

$\xi = \{1, 2, 3, 4, 5, 6\}$. A = even numbers.

B = numbers bigger than 3. Fill in the Venn diagram. List $A \cap B$.

A = { 2, 4, 6 }

B = { 4, 5, 6 }



$A \cap B$
in A and B = { 4, 6 }

Venn Diagrams: Set Notation *further practice*

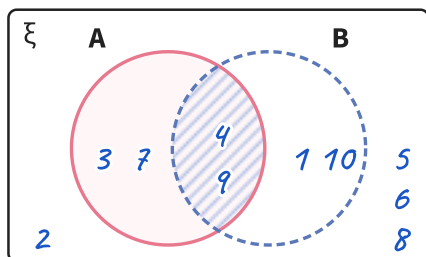
ANSWERS

9

Fill in the Venn diagram. List $A \cap B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \{3, 4, 7, 9\}$ $B = \{1, 4, 9, 10\}$



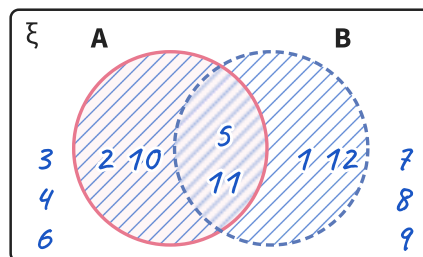
$A \cap B = \{ \quad 4, 9 \quad \}$

10

Fill in the Venn diagram. List $A \cup B$.

$\xi = \{1, 2, 3, \dots, 12\}$

$A = \{2, 5, 10, 11\}$ $B = \{1, 5, 11, 12\}$



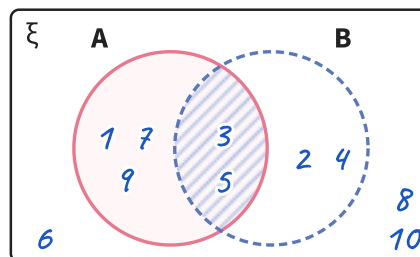
$A \cup B = \{ \quad 1, 2, 5, 10, 11, 12 \quad \}$

11

Fill in the Venn diagram. List $A \cap B$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \text{odd numbers}$ $B = \{2, 3, 4, 5\}$



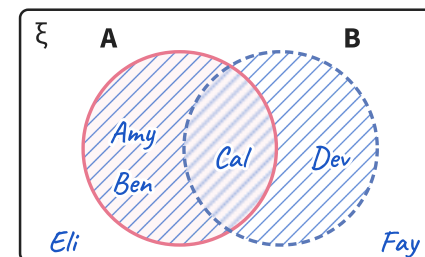
$A \cap B = \{ \quad 3, 5 \quad \}$

12

Six friends. A = has a dog. B = has a cat. Fill in the Venn diagram. List $A \cup B$.

$\xi = \{\text{Amy, Ben, Cal, Dev, Eli, Fay}\}$

$A = \{\text{Amy, Ben, Cal}\}$ $B = \{\text{Cal, Dev}\}$



$A \cup B = \{ \quad \text{Amy, Ben, Cal, Dev} \quad \}$

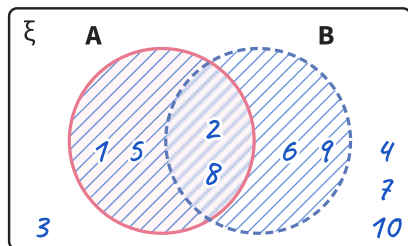
13

Fill in the Venn diagram.

How many numbers are in $A \cup B$?

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \{1, 2, 5, 8\}$ $B = \{2, 6, 8, 9\}$



$A \cup B = \{1, 2, 5, 6, 8, 9\}$

Answer 6

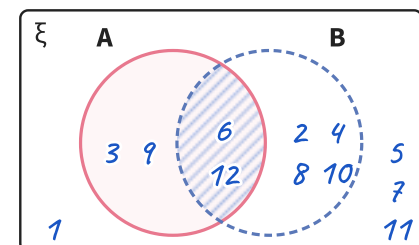
14

Cards numbered 1 to 12.

$A = \text{multiples of 3.}$

$B = \text{even numbers.}$ Fill in the Venn diagram. List $A \cap B$.

$\xi = \{1, 2, 3, \dots, 12\}$



6 and 12 are in both lists

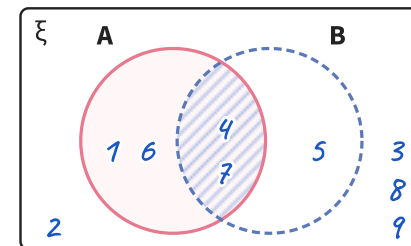
Answer $\{6, 12\}$

15

One number is picked at random from ξ . Find $P(A \cap B)$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$A = \{1, 4, 6, 7\}$ $B = \{4, 5, 7\}$

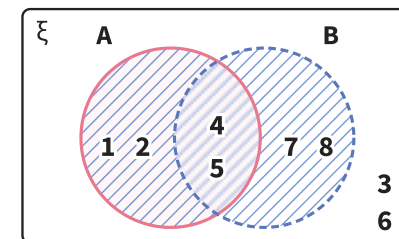


$A \cap B = \{4, 7\}$: 2 out of 9

Answer $\frac{2}{9}$

16

Ali says $A \cup B = \{4, 5\}$. What has Ali done wrong?



$A \cup B$ means
in A or B or both.

Ali has listed $A \cap B$.

Right answer $\{1, 2, 4, 5, 7, 8\}$