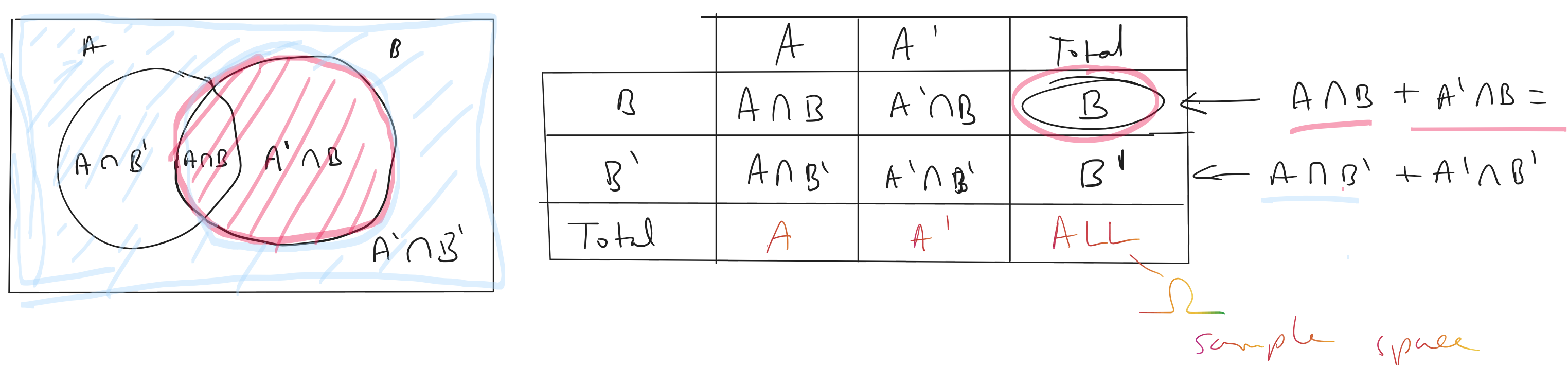
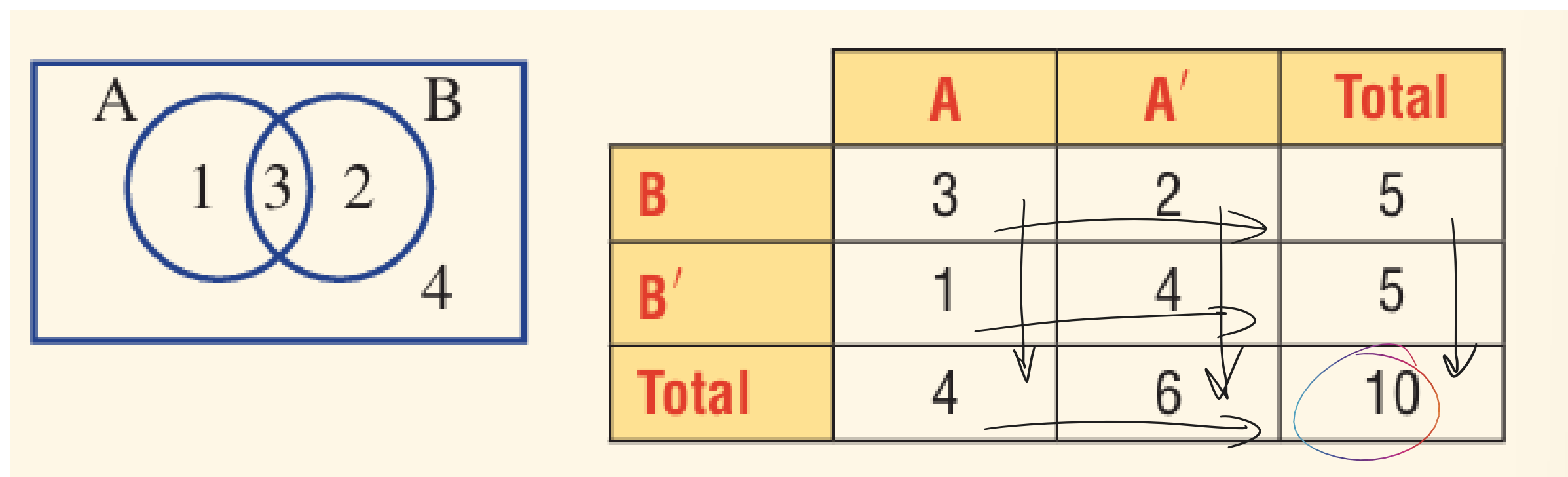


sample space
 $\Omega = \{1, 2, 3, 4, 5, 6\}$
 subset \subset
 $A = \{2, 3\}$
 complement of subset
 $A' = \{1, 4, 5, 6\}$
 not in subset but yes in sample space.
 element \in 'a part of'
 null \emptyset - 'empty'
 number of elements
 $n(A) = 2$



Now you try

A number is chosen from the set of positive integers between 1 and 15 inclusive. A is the set of odd numbers between 1 and 15 inclusive and B is the set of prime numbers between 1 and 15 inclusive.

a List these sets.

i the sample space ii A iii B

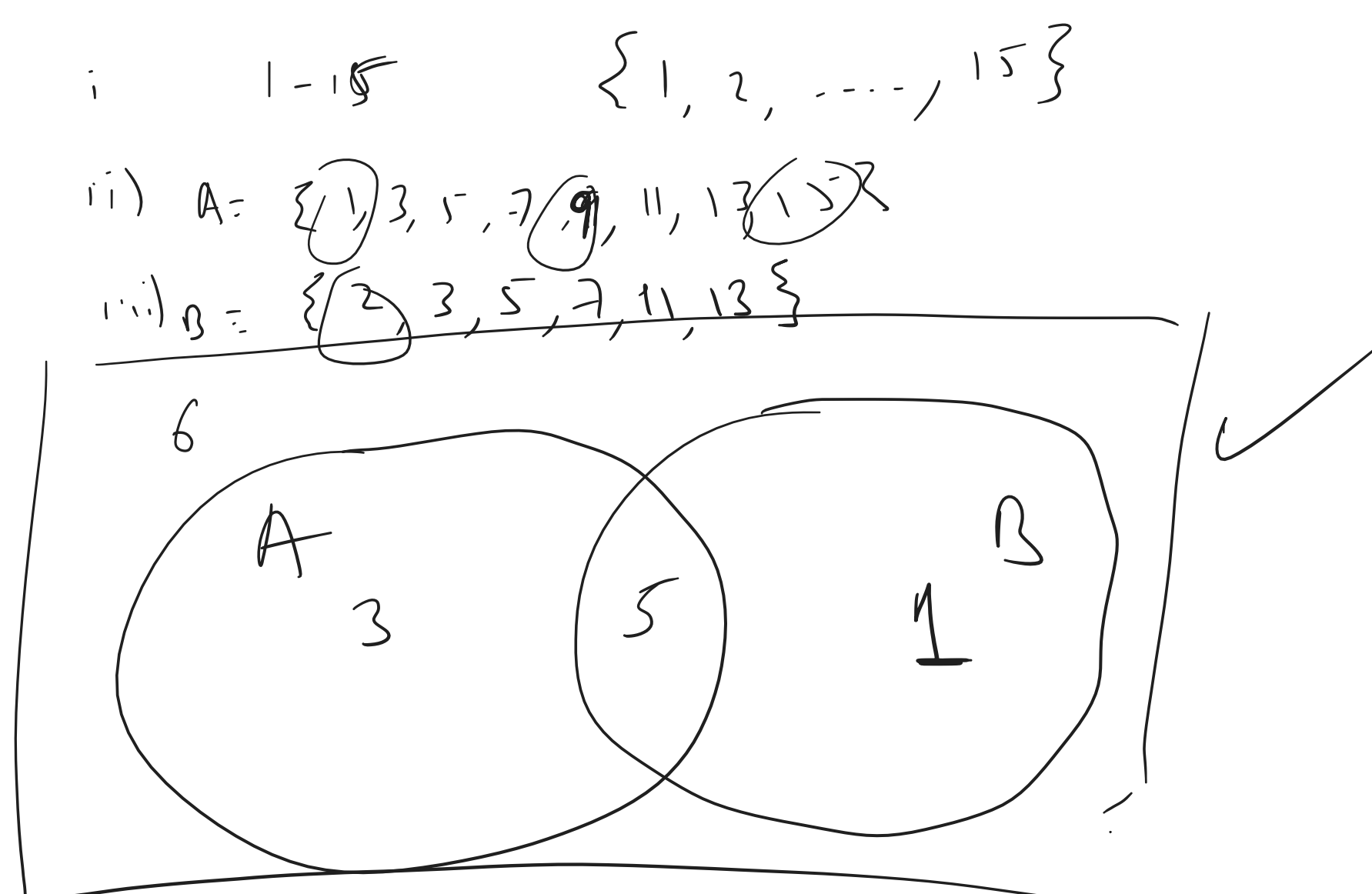
b Draw a Venn diagram.

c List these sets.

i $A \cap B$ ii $A \cup B$ iii A' iv B only

d Find:

i $n(A)$ ii $\Pr(A)$ iii $n(A \cap B)$ iv $\Pr(A \cap B)$



i) $A \cap B = \{3, 5, 7, 11, 13\}$ $n = 5$
 ii) $n \cup B = \{1, 3, 5, 7, 9, 11, 13, 15\}$ $n = 9$
 iii) $A' = \{2, 4, 6, 8, 10, 12, 14\}$ \leftarrow even # \checkmark
 iv) B only = $\{2\}$

$n(A) = 3 + 5 = 8$
 $\Pr(A) = \frac{8}{15} \checkmark$
 $n(A \cap B) = 5$
 $\Pr(A \cap B) = \frac{5}{15} = \frac{1}{3} \checkmark$

	A	A'	Total
B	5	2	7
B'	4	4	8
Total	9	6	15

	A	A'	Total
B	5	8	13
B'	4	4	8
Total	9	12	21