



## Probability Union, Intersection, Complement - Word Problem Counts to Set Operation

1

Which set notation represents the customers who are in at least one of the two groups?

In a group of 20 customers, 3 made a purchase this month, 2 did both, and 15 are in neither group.

$$n^A(\text{Boug} \cup \text{Coup}) \quad n^B(\text{Boug}) + n(\text{Coup})$$

$$n^C(\text{Boug} \cup \text{Coup}) \quad n^D(\text{Boug} \cap \text{Coup})$$

2

Which set notation represents the customers who are in neither group?

In a group of 100 customers, 29 have memberships, 11 do both, and 64 are in the app group but not the member group.

$$n^A(\text{Memb}) + n(\text{App}) \quad n^B(\text{Memb} \cup \text{App})$$

$$n^C(\text{Memb} \cap \text{App}) \quad n^D(\text{Memb} \cup \text{App})'$$

3

Which set notation represents the customers who are in neither group?

In a group of 20 customers, 13 made a purchase this month, 4 used a coupon, and 2 did both.

$$n^A(\text{Boug} \cup \text{Coup})' \quad n^B(\text{Boug}) + n(\text{Coup})$$

$$n^C(\text{Boug} \cap \text{Coup}) \quad n^D(\text{Boug} \cup \text{Coup})$$

4

Which set notation represents the students who are in at least one of the two groups?

In a group of students, 11 take art, 5 take computer science, 2 take both, and 6 are in neither group.

$$n^A(\text{Art} \cup \text{Comp})' \quad n^B(\text{Art}) + n(\text{Comp})$$

$$n^C(\text{Art} \cap \text{Comp}) \quad n^D(\text{Art} \cup \text{Comp})$$

5

Which set notation represents the shoppers who are in neither group?

In a group of 50 shoppers, 9 bought both, 25 are in the fruit group but not the veg group, and 9 are in the veg group but not the fruit group.

$$n^A(\text{Frui} \cup \text{Veg}) \quad n^B(\text{Frui} \cup \text{Veg})'$$

$$n^C(\text{Frui} \cap \text{Veg}) \quad n^D(\text{Frui}) + n(\text{Veg})$$

6

Which set notation represents the customers who are in at least one of the two groups?

In a group of 50 customers, 6 did both, 12 are in the bought group but not the coupon group, and 20 are in the coupon group but not the bought group.

$$n^A(\text{Boug} \cup \text{Coup}) \quad n^B(\text{Boug} \cup \text{Coup})'$$

$$n^C(\text{Boug} \cap \text{Coup}) \quad n^D(\text{Boug}) + n(\text{Coup})$$

7

Which set notation represents the students who are in at least one of the two groups?

In a group of 50 students, 44 run track, 9 swim, and 8 do both.

$$n^A(\text{Trac} \cup \text{Swim})' \quad n^B(\text{Trac} \cap \text{Swim})$$

$$n^C(\text{Trac} \cup \text{Swim}) \quad n^D(\text{Trac}) + n(\text{Swim})$$

8

Which set notation represents the employees who are in at least one of the two groups?

In a group of employees, 17 work in sales, 38 work in marketing, 12 work in both, and 7 are in neither group.

$$n^A(\text{Sale}) + n(\text{Mark}) \quad n^B(\text{Sale} \cup \text{Mark})'$$

$$n^C(\text{Sale} \cup \text{Mark}) \quad n^D(\text{Sale} \cap \text{Mark})$$