



Probability Union, Intersection, Complement - Word Problem Counts and Percents to Formula

1

Let A be the band group and B be the drama group. Which expression gives the number of students who are in neither group?

In a group of 50 students, 38% are in band, 9 are in drama, and 14% are in both.

^A $N - n(A) - n(B)$

^B $n(A) + n(B) - n(A \cap B)$

^C $N - n(A) - n(B) + n(A \cap B)$

^D $N - n(A) - n(B) - n(A \cap B)$

2

Let A be the band group and B be the drama group. Which expression gives the number of students who are in at least one of the two groups?

In a group of 50 students, 33 are in band, 12 are in both, and 14% are in the drama group but not the band group.

^A $n(A) + n(B) + n(A \cap B)$

^B $n(A) + n(B) - n(A \cap B)$

^C $n(A) + n(B)$

^D $n(A) \cdot n(B)$

3

Let A be the hockey group and B be the volleyball group. Which expression gives the number of students who are in at least one of the two groups?

In a group of 25 students, 18 are in the hockey group but not the volleyball group, 12% are in the volleyball group but not the hockey group, and 1 are in neither group.

^A $n(A) + n(B) + n(A \cap B)$

^B $n(A) \cdot n(B)$

^C $n(A) + n(B) - n(A \cap B)$

^D $n(A) + n(B)$

4

Let A be the fiction group and B be the hardcover group. Which expression gives the number of library books who are in at least one of the two groups?

In a group of 25 library books, 6 are fiction, 4 are both, and 52% are in neither group.

^A $n(A) + n(B)$

^B $n(A) + n(B) + n(A \cap B)$

^C $n(A) \cdot n(B)$

^D $n(A) + n(B) - n(A \cap B)$

5

Let A be the band group and B be the drama group. Which expression gives the number of students who are in at least one of the two groups?

In a group of 25 students, 44% are in band, 5 are in drama, and 16% are in both.

^A $n(A) + n(B) - n(A \cap B)$

^B $n(A) + n(B)$

^C $n(A) + n(B) + n(A \cap B)$

^D $n(A) \cdot n(B)$

6

Let A be the band group and B be the drama group. Which expression gives the number of students who are in neither group?

In a group of 100 students, 37% are in band, 13% are in both, and 51 are in the drama group but not the band group.

^A $N - n(A) - n(B) + n(A \cap B)$

^B $N - n(A) - n(B) - n(A \cap B)$

^C $N - n(A) - n(B)$

^D $n(A) + n(B) - n(A \cap B)$

7

Let A be the trained group and B be the certified group. Which expression gives the number of employees who are in neither group?

In a group of 25 employees, 18 completed training, 3 have both, and 8% are in the certified group but not the trained group.

^A $N - n(A) - n(B)$

^B $N - n(A) - n(B) - n(A \cap B)$

^C $N - n(A) - n(B) + n(A \cap B)$

^D $n(A) + n(B) - n(A \cap B)$

8

Let A be the hockey group and B be the volleyball group. Which expression gives the number of students who are in neither group?

In a group of 25 students, 12% play both, 10 are in the hockey group but not the volleyball group, and 7 are in the volleyball group but not the hockey group.

^A $N - n(A) - n(B) + n(A \cap B)$

^B $n(A) + n(B) - n(A \cap B)$

^C $N - n(A) - n(B) - n(A \cap B)$

^D $N - n(A) - n(B)$