



Probability Union, Intersection, Complement - Word Problem Counts to Probability

1

If one of the customers is chosen at random, what is the probability they are in neither group?

In a group of 20 customers, 8 have memberships, 3 do both, and 10 are in the app group but not the member group.

A	$\frac{1}{2}$	B	$\frac{7}{10}$
C	$\frac{1}{10}$		

2

If one of the students is chosen at random, what is the probability they are in the music group?

In a group of students, 12 take both, 4 are in the French group but not the music group, 22 are in the music group but not the French group, and 12 are in neither group.

A	$\frac{23}{50}$	B	$\frac{17}{25}$
C	$\frac{23}{25}$	D	$\frac{11}{25}$

3

If one of the customers is chosen at random, what is the probability they are in at least one of the two groups?

In a group of 50 customers, 20 have memberships, 9 do both, and 8 are in the app group but not the member group.

A	$\frac{14}{25}$	B	$\frac{37}{50}$	C	$\frac{6}{25}$
D	$\frac{41}{50}$	E	$\frac{23}{25}$		

4

If one of the students is chosen at random, what is the probability they are in neither group?

In a group of 100 students, 95 play hockey, 5 play both, and 1 are in the volleyball group but not the hockey group.

A	$\frac{1}{25}$	B	$\frac{9}{100}$
C	$\frac{41}{50}$		

5

If one of the shoppers is chosen at random, what is the probability they are in the veg group but not the fruit group?

In a group of 20 shoppers, 15 bought fruit, 7 bought vegetables, and 1 are in neither group.

A	$\frac{3}{20}$	B	$\frac{7}{20}$	C	$\frac{1}{2}$
D	$\frac{1}{5}$	E	$\frac{4}{5}$		

6

If one of the students is chosen at random, what is the probability they are in at least one of the two groups?

In a group of 50 students, 8 are in the art group but not the comp sci group, 31 are in the comp sci group but not the art group, and 4 are in neither group.

A	$\frac{6}{5}$	B	$\frac{43}{50}$	C	$\frac{53}{50}$
D	$\frac{9}{25}$	E	$\frac{23}{25}$		

7

If one of the gym members is chosen at random, what is the probability they are in the yoga group?

In a group of 20 gym members, 3 are in the yoga group but not the spin group, 11 are in the spin group but not the yoga group, and 4 are in neither group.

A	$\frac{2}{5}$	B	$\frac{1}{4}$
C	$\frac{7}{20}$	D	$\frac{3}{20}$

8

If one of the employees is chosen at random, what is the probability they are in the full-time group?

In a group of 20 employees, 5 have both, 11 are in the full-time group but not the 10+ yrs group, and 1 are in the 10+ yrs group but not the full-time group.

A	$\frac{21}{20}$	B	$\frac{2}{5}$	C	$\frac{11}{20}$
D	$\frac{4}{5}$				