

C12 - 11.6 - President vs. Committee WS

How many ways can you select a committee of three people from 11 people?

How many ways can you select a committee of three people from five boys and six girls?

How many ways can you select a president, secretary, and treasurer from 11 people?

How many ways can you select a president, secretary, and treasurer of three people from five boys and six girls?

How many ways can you select a committee of three people with exactly 2 boys and a girl from five boys and six girls?

How many ways can you select a committee of three people with at least two girls, from five boys and six girls?

How many ways can you select a committee of three people with at least one girl, from five boys and six girls?

How many ways can you select a committee of six people with at least one boy, from 12 boys and 13 girls?

How many ways can you select a committee of 10 people with at least one girl, from 12 boys and 13 girls?

C12 - 11.6 - nPr nCr $n!$ WS

Solve. Use blanks and repeated multiplication with factorial notation and combination and permutation notation where necessary. Practice both algebra and using your calculator.

How many ways can you select a captain from a team of nine players?

How many ways select a captain and a ball person from a team of nine players?

How many ways can you select three defenceman from a team of nine players?

How many ways can you select four mid-fielders from a team of nine players?

How many ways are there to select a 9 person batting order from a team of 13?

How many ways can you select nine players for the field from a team of 13?

How many ways can seven people sit in a row?

How many ways can five people sit in a row?

How many ways can seven people be chosen from 10 to sit in a row?

How many ways can five people be chosen from eight to sit in a row?

C12 - 11.6 - nPr nCr $n!$ Restrictions WS

Solve. Use blanks and repeated multiplication with factorial notation and combination and permutation notation where necessary. Practice both algebra and using your calculator.

How many ways can four boys and four girls sit in a row if?:

There are no restrictions:

All the girls must sit together, and all the boys must sit together?

Boys and girls must alternate:

The boys must be on the ends of the rows:

Matthew, a boy, must sit on the end:

Matthew, a boy, cannot sit on the end:

Note: No restrictions – Matthew must sit on the end!

Jacquelyn and Emily must sit together:

Jacquelyn and Emily cannot sit together:

How many ways can four boys and four girls sit in a circle if:

Remember: lock one person into a seat, and consider a row with one less person.

There are no restrictions:

All the girls must sit together, and all the boys must sit together?

Boys and girls must alternate:

The boys must be on the ends of the rows:

Jacquelyn and Emily must sit together:

Jacquelyn and Emily cannot sit together: