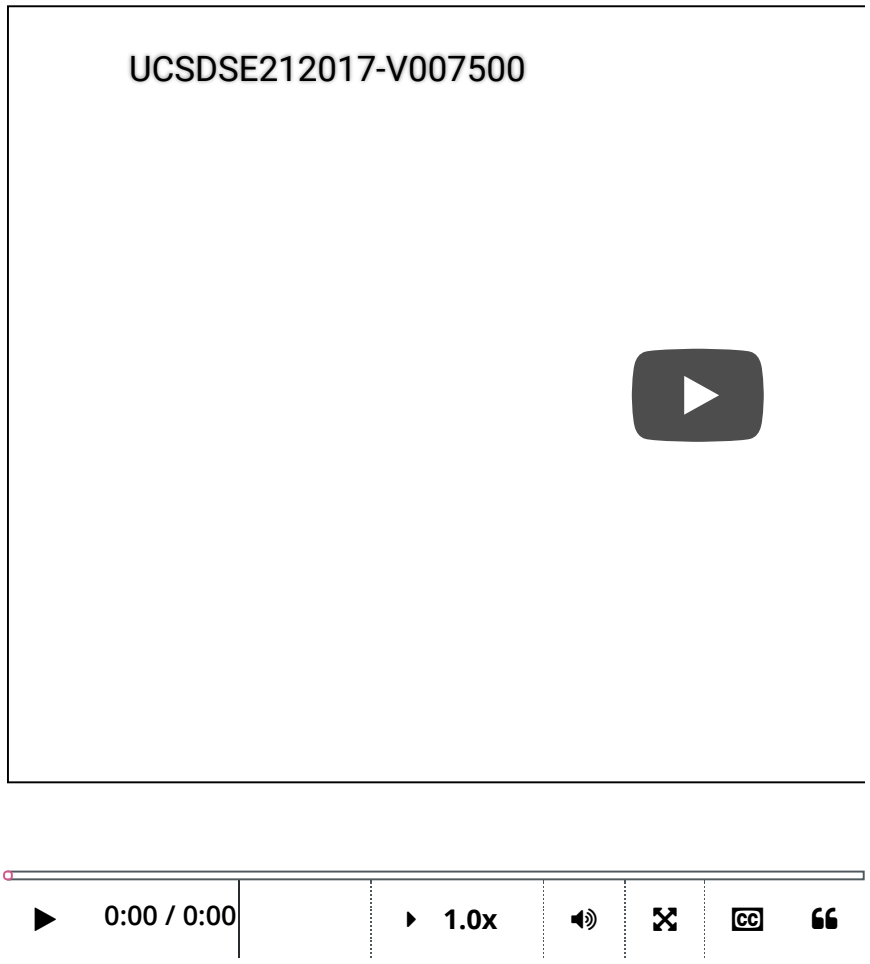
Binomial Coefficients Video



Start of transcript. Skip to the end.

- Last time we defined the Binomial Coefficients

that count the number of n-bit sequences with k 1's

or equivalently the number of k-element subsets of a set

of size n and in this video we want to talk about a few

examples of the Binomial Coefficients.

So let's start.

So first as we just

4.4_Applications_of_Binomial_Coefficients

POLL

You school offers 6 science classes and 5 art classes. How many schedules can you form with 2 science and 2 art classes if order doesn't matter.

RESULTS

150	**76%**
25	**18%**
60	**3%**
55	**2%**

Submit

Results gathered from 322 respondents.

FEEDBACK

The answer is (6 choose 2) * (5 choose 2) = 150.

1

1/1 point (graded)

Which of the following is the expansion of $(x+y)^3$?

- x^3+y^3
- $x^3+x^2y+xy^2+y^3$
- $x^3+6xy+y^3$
- $x^3+3x^2y+3xy^2+y^3$ ✔

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

2

2.0/2.0 points (graded)

How many ordered pairs (A,B), where A, B are subsets of $\{1,2,3,4,5\}$, are there if:

- $|A| + |B| = 4$

210 ✔ **Answer:** 210

210

Explanation

Number of ways is $\binom{5}{0}\binom{5}{4} + \binom{5}{1}\binom{5}{3} + \cdots + \binom{5}{4}\binom{5}{0}$.

Submit You have used 3 of 4 attempts

Answers are displayed within the problem

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