

TODAY'S AGENDA: March 22-23

- Work on Khan Academy Mission:
 - > Probability
- Today's Objective: Small-Group Lesson:
 - > Combinations and Permutations
- Today's Standard:
 - > Summarize, represent and interpret data on a single count or measurement variable.

Permutations vs. Combinations

Permutations

Arrangement
Order is Impt.



Combinations

Groups
Order Not Impt



You have 6 reindeer, Jebediah, Bloopin, Balthazar, Ezekiel, Prancer, and Lancer, and you want to have 4 fly your sleigh. You always have your reindeer fly in a single-file line.

How many different ways can you arrange your reindeer?

$6P4$

How many unique ways are there to arrange the letters in the word TIGER?

120

5 P 5

↑
How many
you have

You just got a free ticket for a boat ride, and you can bring along 3 friends! Unfortunately, you have 5 friends who want to come along.

How many different groups of friends could you take with you?

$5C3$

You just got a free ticket for a boat ride, and you can bring along 3 friends! Unfortunately, you have 6 friends who want to come along.

How many different groups of friends could you take with you?

20

6C_3

Stephanie is packing her bags for her vacation. She has 7 unique books, but only 3 fit in her bag.

How many different groups of 3 books can she take?

$$\begin{array}{r} 7C3 \\ 7! \\ \hline 3!(7-3)! \end{array}$$

~~$7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1$~~
 ~~$3 \cdot 2 \cdot 1 \cdot 4 \cdot 3 \cdot 2 \cdot 1$~~

10 kids 3b

7g

7	C 3
10	C 3