Goals

- Derive formulas for permutations and combinations
- Solve problems using permutations and combinations.

Problems

- What is the mathematical formula for $P(n, k)$?
- What is the mathematical formula for $C(n, k)$?

Use $m! = 1 \times 2 \times 3 \times \cdots \times m = \prod_{i=1}^{m} i$

Please practice explaining your formula to each other.