

THE BIG PICTURE: Does it matter where the objects go? Are you choosing for a group or specific roles?

### Combinations

- Order doesn't matter
- Groups of things
- Examples:
  - 5-card hand
  - Group of friends
  - Members of the Senate
  - Teachers at Berkley High School
  - Choose any three desserts from menu
  - Create groups of 5 people
  - Pick your players for the team
- Fewer results than permutations

### Permutations

- Order matters
- Details matter
- Lists
- Examples:
  - Trophy placement (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>,...etc)
  - Council Leadership (President, V.P., Secretary, Treasure)
  - Administration Roles (Principal, Assistant Principal, Principal Secretary, Counselors, etc..)
  - Sports (Team Captain, Co-Captain, waterboy)
  - Pick your favorite teacher from most to least
- More results than combinations

THE BIG PICTURE: Does it matter where the objects go? Are you choosing for a group or specific roles?

### Combinations

- Order doesn't matter
- Groups of things
- Examples:
  - 5-card hand
  - Group of friends
  - Members of the Senate
  - Teachers at Berkley High School
  - Choose any three desserts from menu
  - Create groups of 5 people
  - Pick your players for the team
- Fewer results than permutations

### Permutations

- Order matters
- Details matter
- Lists
- Examples:
  - Trophy placement (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>,...etc)
  - Council Leadership (President, V.P., Secretary, Treasure)
  - Administration Roles (Principal, Assistant Principal, Principal Secretary, Counselors, etc..)
  - Sports (Team Captain, Co-Captain, waterboy)
  - Pick your favorite teacher from most to least
- More results than combinations