Each of you has 10 cubilinks.

Permutations:

1. How many different ways can you arrange all of those cubilinks in one stack?
2. How many different ways can you stack *both* four cubes in one pile and six cubes in another?
3. How many different ways can you stack just four cubes?
4. How do your answers for 1, 2, and 3 differ from one another? How are they the same?

Combinations:

1. How many different 4 block squares can you get from the 10 cubilinks? How does your answer relate to 1, 2, and 3?

Timmy and Jimmy are in the chess club with 5 other members (making a total of 7 people in the club). The club is going on a field trip to the National Chess Museum, so the club advisor has rented a bus that seats exactly 8 people (two in the front and three people to each of the 2 back rows). If the advisor must be the one to drive, how many different ways could the students sit in the vehicle? What if Timmy and Jimmy wanted to sit next to each other? What if they did *not* want to sit next to each other?