2025 Sept AMC 8 Week 1 Day 3 - Combination

1 Pick 3 from 8 children to take part in interview. How many different combination(s) is / are there ?

A. 36 B. 42 C. 48 D. 56 E. 72

2 3 of the 5 children are selected to participate in a competition, and Chris and Debbie are 2 of the 5 children. If at least one people between Chris and Dibbie is selected, how many ways of selecting participants are there?

A. 17 B. 2021 C. 9 D. 5 E. 1

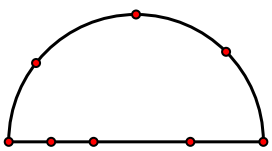
3 Brandon needs to choose three courses to study from Physics, Chemistry, Biology, Politics, History, and Geography. He has already chosen Physics. How many different ways are there for him to choose the other two courses?

A. 10 B. 15 C. 20 D. 30

4 Connect the diagonals of square $ABCD$, and color each of the four vertices either red or yellow. A triangle whose vertices are all the same color is called a monochromatic triangle. How many coloring methods in which there is at least one monochromatic triangle?

A. 12 B. 17 C. 15 D. 22 E. 10

5 From the 8 points shown in the figure, choosing any 3 as vertices, how many triangles can be formed?



A. 40 B. 42 C. 44 D. 46 E. 52