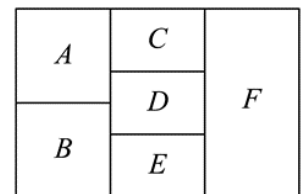


2025 Sept AMC 10 Week 1 Day 1 - Counting Principles

- 1 From 4 boys and 2 girls, select 3 people to form a team for the competition. If at least 1 girl must be included, then the total number of different ways to form the team is () .

A. 8 B. 12 C. 16 D. 20 E. 24

- 2 Given 6 different colors of paint to color the six regions A, B, C, D, E , and F in the figure, with the condition that adjacent regions cannot be painted the same color, how many different colorings are there?



A. 3880 B. 3180 C. 6120 D. 3240 E. 5180

- 3 Five students A, B, C, D , and E participate in a certain technical competition and receive the first through fifth places. A and B ask about the results. The organizer tells A : "Unfortunately, neither you nor B won the championship." To B , the organizer says: "Of course, you are not in the last place." Based on the organizer's responses, how many different possible rankings of the five students are there?

A. 32 B. 38 C. 48 D. 54 E. 64

- 4 From 1, 2, 3, 4, 5, and 6, select any three different digits to form a three-digit number. Among all such numbers, how many odd numbers that greater than 300 can be formed?

A. 32 B. 40 C. 56 D. 60 E. 68

5

There are 16 players in a chess qualifying tournament. Each pair of players plays exactly one game. In each game, the winner gets 1 point and the loser gets 0 points; if the game is a draw, each player gets 0.5 points. After all the games are finished, players with at least 10 points can advance. What is the maximum possible number of players who can advance in this tournament?

A. 8

B. 9

C. 10

D. 11

E. 12