QUICK QUESTION 1 (2/2 points)

Suppose that you are trying to schedule 3 games between 6 teams (A, B, C, D, E, and F) that will occur simultaneously. Which of the following are feasible schedules?

☑ A plays B, C plays D, and E plays F ✔

☐ A plays C, B plays D, and C plays F

☑ A plays F, B plays E, and C plays D ✔

☐ A plays B, B plays C, and C plays D

☑ A plays D, B plays E, and C plays F ✔

EXPLANATION

Each of the teams has to play exactly one of the other teams for the games to occur simultaneously. In the second option, C is playing twice, which is impossible. In the fourth option, B and C are both playing twice.

How many different feasible schedules are there?

○ 5

○ 10

◉ 15 ✔

○ 20

○ 25

EXPLANATION

There are 15 different feasible schedules. We can count them by observing that A can play any of the 5 teams. Once this is fixed, we have 4 teams left. There are 3 ways to make two pairs out of 4 teams. So in total, there are 5*3 = 15 different schedules. Here is a list of all of them:

A plays B, C plays D, E plays F

A plays B, C plays E, D plays F

A plays B, C plays F, D plays E

A plays C, B plays D, E plays F

A plays C, B plays E, D plays F

A plays C, B plays F, D plays E

A plays D, B plays C, E plays F

A plays D, B plays E, C plays F

A plays D, B plays F, C plays E

A plays E, B plays C, D plays F

A plays E, B plays D, C plays F

A plays E, B plays F, C plays D

A plays F, B plays C, D plays E

A plays F, B plays D, C plays E

A plays F, B plays E, C plays D

Final Check   Save   Hide Answer   *You have used 1 of 2 submissions*