

Define a triangle to be a set of three different players. Then there are $\binom{21}{3}$ triangles. If a triangle is not symmetric, then there is one player in the triangle who beats the other two. Given a player A , because A beats 10 other people, A will be the dominant player in $\binom{10}{2}$ triangles. Because a non-symmetric triangle has exactly one dominant player, there are a total of $21\binom{10}{2}$ such triangles. All other triangles are symmetric. Thus there are

$$\binom{21}{3} - 21\binom{10}{2} = 385$$

non-symmetric triangles.