Submarine Sandwich Problem

Last year I took my students on field trips related to the projects we were working on. At one point, we went to several places in Washington, D.C. With the help of some parents we divided ourselves into four different groups. At lunchtime, we were all at different places in the city. Four students were at the Washington Monument, five were at the White House, eight were with me at the Lincoln Memorial, and the five remaining students were at the Jefferson Memorial. The problem we ran into was that the school cafeteria staff had made seventeen submarine sandwiches for the kids for lunch. They gave three sandwiches to the four kids going to the Washington Monument. The five kids in the second group got four subs. The eight kids going to the Lincoln Memorial got seven subs, and that left three for the five kids at the Jefferson Memorial. The next day after talking about our trips, several of the kids complained that it hadn’t been fair, that some kids got more to eat. What do you think about this? Were they right? Because if they were, I would really like to work out a fair system – one where I would know how many subs to give each group when we go on field trips this year.