

During a recent meeting of the ISU Mathematics Club, 24 members attended and each arrived with a coat; all of the coats were of different sizes and were left in a pile in a corner. The club members left one at a time. Each went to the pile of coats and took the first coat she/he found that was not smaller than her/his size. If all the remaining coats were smaller than their size, they left with no coat. If nine members left with their own coat, could there have been eight who left without coats?