(A1) Show that the number of partitions of $n$ for which no part appears exactly once is equal to the number of partitions of $n$ for which every part is divisible by 2 or 3. For instance, when $n = 6$ there are four partitions of the first type (namely, 111111, 2211, 222, 33) and four of the second type (222, 33, 42, 6). Use generating functions.

(A2) Show that the number of partitions of $n$ for which no part appears more than twice is equal to the number of partitions of $n$ for which no part is divisible by 3. For instance, when $n = 5$ there are five partitions of the first type (namely, 5, 41, 32, 311, 221) and five of the second type (5, 41, 221, 2111, 11111). Use generating functions.