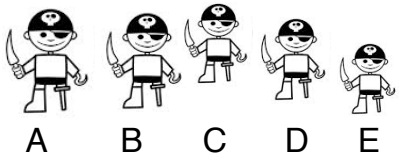
Solve the following two problems. Write your solutions in **English**.

1. *(Five greedy pirates)*: (Hint: work backwards.)

There are five perfectly intelligent and greedy pirates. They have one hundred gold coins to split between the five of them. The pirates have seniority in the following order: Pirate A, Pirate B, Pirate C, Pirate D, and then Pirate E. Each pirate knows the rules of the game they are about to play, which goes as follows:

Pirate A makes a suggestion about how to split the coins. All of the pirates, including Pirate A, then vote on the suggested allocation. If there is a majority of votes, or a tie, then the allocation is approved and the game ends. Otherwise, Pirate A is thrown off the boat to his death and Pirate B becomes the most senior pirate and get to make his own suggestion. The game continues in this fashion until an agreement is reached. What happens?



2. *(Another checkerboard problem)*:
Two squares from each of two opposite corners of a checkerboard are deleted as shown on the figure below. Prove that the remaining squares cannot be covered exactly by copies of the "T-shaped" dominoes and their rotations.