

# Pirate Gold



The five crew members of a small pirate ship have just completed a raid in another crew's territory, and they now have 100 gold coins to split among themselves.

"What a raid!" says the captain Anastasia. "Look at the feather in my hat – it's been torn to shreds."

"Aye," agrees the first mate Bartholomew. "I have a new hole in my coat."

"Lucky my compass didn't get smashed while we were retreating back to sea," remarks the navigator Cornelius.

"That's thanks to me spotting the counterattack from the crow's nest," the lookout Desdemona reminds him.

"But you didn't save my ladle from going overboard in the commotion," mutters the cook Ed.

After some arguing, the pirates agree to split the 100 gold coins according to the following procedure: The captain Anastasia will make a proposal for how to share the coins, and all five pirates (including Anastasia herself) will vote for or against it. If 50% or more of the pirates vote for it, then the coins will be shared according to that proposal. Otherwise, the pirate proposing the scheme will be thrown overboard, and the procedure will be repeated with the pirates that remain, with the pirate of next highest seniority making the next proposal. (The pirates in order of seniority are Anastasia, Bartholomew, Cornelius, Desdemona, and Ed.)

Since pirates are a pretty nasty bunch, if a pirate would get the same number of coins if she/he voted for or against a proposal, she/he will vote against it in order to see the pirate who proposed the plan being thrown overboard.

Assuming that all five pirates are smart, completely rational, and unwilling to be thrown overboard, what is the maximum number of coins that Anastasia can get?