1. Explain the role of the break-even response rate in targeted marketing campaigns. (**4pts**)
   * Tips: Focus on why we need to compute break-even response rate? Once we have break-even response rate, how can we decide which customers to target?

The break-even response rate is the percentage of response rate necessary to cover the cost of a marketing campaign. If the response rate is under the break-even rate, the marketer would lose money. This figure allows a marketer to choose customers with a response rate higher than the break even rate to maximize his chance of making a profit out of the campaign

1. Calculations
2. Explain why we need to do the above splitting step (Question 3) in a supervised learning task? (**6pts**)

In a supervised learning

Refer

Sources

1 ) Wei Miao, 2022 Class 7: Supervised Learning (Decision Tree and Random Forest)