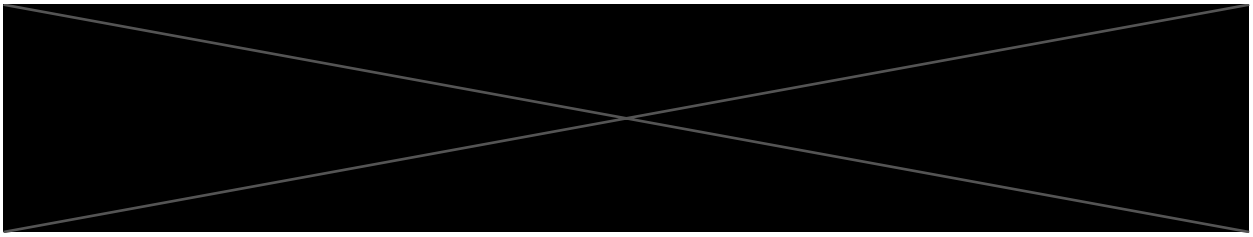

9. **In PCA, if an eigenvalue is less than 1, what does it imply about the corresponding principal component?** (1.5 punti)

- ◯ It explains more variance than one of the original variables.
- ◯ It is a suitable candidate for dimensionality reduction.
- ● It explains less variance than one of the original variables.
- ◯ It should be used for clustering analysis.

10. **What does a high lift ratio in MBA indicate about the product pair?** (1.5 punti)

- ◯ The products are likely substitutes.
- ● The products are frequently bought together more than expected by chance.
- ◯ The products are independent of each other.
- ◯ The products have a negative association.

11. **In RFM analysis, what can not be the implication of a low 'Recency' score (e.g., 4 out of 4 quartiles) for a customer segment?** (1.5 punti)

- ◯ No recent engagement with the brand.
- ◯ Low potential for upselling.
- ◯ Potential risk of customer churn.
- ● Low average transaction value.

12. **How does incorporating inter-purchase time change the traditional RFM analysis in customer segmentation?** (1.5 punti)

- ◯ It allows for real-time segment updates.
- ● It adds a temporal dimension to understand customer engagement better.
- ◯ It focuses solely on the monetary value of purchases.
- ◯ It eliminates the need for frequency analysis.

13. **In PLS-SEM, if a latent variable in the field of social science has an R-squared value of 0.7, what does it indicate about the model?** (1.5 punti)

- ◯ Low predictive accuracy for that particular latent variable.
- ◯ High complexity of the model.
- ● Good explanatory power for that particular latent variable.
- ◯ Low predictive accuracy for all the latent variables.

14. **What is the purpose of using a varimax rotation in factor analysis?** (1.5 punti)

- ◯ To simplify the interpretation by making the loadings of each variable as high as possible.
- ● To maximize the loading of each variable on one factor and minimize it on all others.
- ◯ To evenly distribute loadings across all factors.
- ◯ To identify nonlinear relationships between variables and factors.

15. **Attribution Models:** (1.5 punti)

- ◯ Are typically used to compute the ROI of online and offline channels.
- ● Link individual consumer's touchpoint data to digital conversions.
- ◯ Are typically used to optimize media and marketing spending across offline and online channels.
- ◯ Should not be used when dealing with digital channels.

16. **Marketing Mix Models:** (1.5 punti)

- ◯ Are typically used for real-time optimization of digital marketing expenditures.
- ◯ Accurately estimate all internal business drivers and compute their impact on sales but do not consider external factors.
- ◯ Cannot be used to estimate the expected outcome of future investments but are useful to estimate the return on marketing investment for all channels.
- ● Are utilized to estimate elasticity and diminishing returns which can be use to optimize the allocation of budgets across channels.