

MTH 325, Quiz #8, Spring 2024 Name \_\_\_\_\_

**Instructions:** Answer each question as thoroughly as possible. Round answers to 4 decimal places as needed. Exact answers are best when possible. Be sure to answer all parts of each question.

1. Describe the difference between unsupervised learning and semi-supervised learning.
2. Explain how factor analysis is related to correlation.
3. Describe two advantages and at least one disadvantage of neural networks.
4. Describe leave-one-out cross validation and why we use it to validate classification models.