Quiz 9

⚠ **This is a preview of the published version of the quiz**

Started: Jan 20 at 5:23pm

Quiz Instructions

This quiz covers PCA. You have 30 minutes to complete this quiz.

Question 1	5 pts

Find the eigenvectors and eigenvalues of the following matrix.

$$\begin{pmatrix} 1 & 8 \\ 1 & 3 \end{pmatrix}$$

Edit   View   Insert   Format   Tools   Table

12pt   Paragraph   **B**   *I*   U   A   🖋   T²   ⋮

p

0 words   </> ↗ ⠿

Ques ⚠ This Quiz Will Be Submitted In Thirty Minutes ✕ **5 pts**

Given the following eigenvectors and corresponding eigenvalues for a data matrix Z

$$v_1 = \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix}, \lambda_1 = 3$$

$$v_2 = \begin{pmatrix} 1 \\ -2 \\ 1 \end{pmatrix}, \lambda_2 = 2$$

$$v_3 = \begin{pmatrix} -1 \\ 0 \\ 1 \end{pmatrix}, \lambda_3 = 1$$

Project the following point onto the first two principal components.

$$\begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix}$$

Edit　View　Insert　Format　Tools　Table

12pt ∨　　Paragraph ∨　　**B**　*I*　U̲　A̲ ∨　✎ ∨　T² ∨　⋮

p

⌨　ⓘ　| 0 words　　</>　↗　⋮

This Quiz Will Be Submitted In Thirty Minutes ✕

Not saved | Submit Quiz