Introduction to Julia on JuliaAcademy

Basics of Linear Algebra - Quiz

1. Consider a 4x4 Array namely **L**.
   On declaring **L = M** and later modifying the newly *copied* array "M", what do you expect to happen ?

   A. Change in **M**, No Change in **L**
   B. No Change in **M**, No Change in **L**
   C. Change in **M**, and Change in **L**
   D. No Change in **M**, Change in **L**

2. Assume **Q** to be a 3x3 Array.
   What would **Q'** and **Q(dot)'** give us respectively ?

   A. Transpose, Conjugate Transpose
   B. Conjugate Transpose, Transpose
   C. Same Result : Transpose
   D. Same Result : Conjugate Transpose

3. While solving linear systems in Julia, when do we get a *minimum norm solution*?
    A. When we have a “tall” matrix / overdetermined linear system.
    B. When we have a “short” matrix / underdetermined linear system
    B. When we have a rank-deficient least squares problem
    C. When we have a square matrix.

4. If P = $\begin{bmatrix} 2 & 4 & 3 \\ 3 & 1 & 5 \end{bmatrix}$ and Q = $\begin{bmatrix} 3 & 10 \\ 4 & 2 \\ 1 & 7 \end{bmatrix}$. What is the product of these two matrices ? (Don’t write the code to get the answer !)
    A. No Solution, Matrices cannot be multiplied.
    B. $\begin{bmatrix} 18 & 67 \\ 25 & 49 \end{bmatrix}$
    C. $\begin{bmatrix} 36 & 49 \\ 37 & 68 \end{bmatrix}$
    D. $\begin{bmatrix} 25 & 49 \\ 18 & 67 \end{bmatrix}$

Quiz Answers

And Helpful Time Stamps

1. The Answer is **C** since Matrix1 = Matrix2 just instructs Julia that the latter is a pointer to former and now a new datapoint.
   Time: **0:55**
2. The Answer is **B.** It's mentioned in the notebook that is being run in the lecture.
   Time: **2:44**
3. The Answer is **B.**
   Time: **4:20**
4. The Answer is **D.**
   Implementation.

- Quiz Setter : *PseudoCodeNerd*