1. Use of cell phones is NOT allowed.
2. Answers without supporting work will NOT be given credit.
3. You have **15 minutes** to complete this quiz.

Name:

Serial:

1. Solve the linear system

$$X' = \begin{pmatrix} 3 & 2 \\ -2 & -1 \end{pmatrix} X + \begin{pmatrix} 2e^{-t} \\ e^{-t} \end{pmatrix}$$

2. [**Bonus**] Solve the IVP

$$X' = \begin{pmatrix} 3 & 2 \\ -2 & -1 \end{pmatrix} X + \begin{pmatrix} 2e^{-t} \\ e^{-t} \end{pmatrix}, \qquad X(0) = \begin{pmatrix} \frac{3}{2} \\ -2 \end{pmatrix}$$

Dr. Khalid Alanezy

The End.