KFUPM/ Department of Mathematics & Statistics/ 171/ MATH 260-05/ Quiz 1

Name: **ID #:** **Serial #:**

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1. [8pts] Solve the IVP: $(y-1)\sin x + y' = 0$, $y(\pi) = 2$.

2. [8pts] The coefficient matrix of a (homogeneous) system of equations in unknowns x, y, z, w is $\begin{bmatrix} 2 & -4 & 2 & -2 \\ 2 & -4 & 3 & -4 \\ 4 & -8 & 3 & -2 \end{bmatrix}$.

   (i) Find the RREF of the matrix.

   (ii) Use (i) to determine the free variables.