Assume that the matrix $R$ is the reduced echelon form of some matrix $A$.

$$B = \begin{pmatrix} 1 & 0 & 2 & 0 & 1 \\ 0 & 1 & 0 & 0 & 2 \\ 0 & 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

- Find a basis for the vector space $\text{row}(A)$.

- Find a basis for $\text{null}(A)$.

- Can you find a basis for $\text{col}(A)$? Explain your answer.

- Which columns of $A$ form a basis for $\text{col}(A)$?

- What is $\text{rank}(A)$?