

# Clicker Slides Math 35100

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Question 1:

$$\text{Let } B = \begin{pmatrix} 1 & -1 & 2 \\ -1 & 1 & 1 \\ 1 & -1 & 5 \end{pmatrix}$$

What is the dimension of  $\mathcal{N}(B)$ , the null space of  $B$ ?

**A.** 1      **B.** 2      **C.** 3      **D.** 4      **E.** 5

**F.** 6      **G.** 7      **H.** 8      **I.** 9      **J.** 0

Question 2:

$$\text{Let } B = \begin{pmatrix} 1 & -1 & 2 \\ -1 & 1 & 1 \\ 1 & -1 & 5 \end{pmatrix}$$

Find a basis for  $\mathcal{N}(B)$ , the null space of  $B$ .

$$\mathbf{A.} \left\{ \begin{pmatrix} 1 \\ -1 \\ 2 \end{pmatrix} \right\} \quad \mathbf{B.} \left\{ \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix} \right\} \quad \mathbf{C.} \left\{ \begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix} \right\} \quad \mathbf{D.} \left\{ \begin{pmatrix} 0 \\ 0 \\ 3 \end{pmatrix} \right\}$$

Question 3:

$$\text{Let } B = \begin{pmatrix} 1 & -1 & 2 \\ -1 & 1 & 1 \\ 1 & -1 & 5 \end{pmatrix}$$

What is the dimension of  $\mathcal{R}(B)$ , the range of  $B$ ?

**A.** 1      **B.** 2      **C.** 3      **D.** 4      **E.** 5

**F.** 6      **G.** 7      **H.** 8      **I.** 9      **J.** 0

Question 4:

$$\text{Let } B = \begin{pmatrix} 1 & -1 & 2 \\ -1 & 1 & 1 \\ 1 & -1 & 5 \end{pmatrix}$$

Find a basis for  $\mathcal{R}(B)$ , the range of  $B$ ?

- A.**  $\left\{ \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix}, \begin{pmatrix} -1 \\ 1 \\ -1 \end{pmatrix} \right\}$     **B.**  $\left\{ \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix}, \begin{pmatrix} 2 \\ 1 \\ 5 \end{pmatrix} \right\}$     **C.**  $\left\{ \begin{pmatrix} -1 \\ 1 \\ -1 \end{pmatrix}, \begin{pmatrix} 2 \\ 1 \\ 5 \end{pmatrix} \right\}$
- D.**  $\left\{ \begin{pmatrix} 1 \\ -1 \\ 2 \end{pmatrix}, \begin{pmatrix} 0 \\ 0 \\ 3 \end{pmatrix} \right\}$     **E.**  $\left\{ \begin{pmatrix} 1 \\ -1 \\ 2 \end{pmatrix}, \begin{pmatrix} -1 \\ 1 \\ 1 \end{pmatrix} \right\}$