

# Clicker Slides Math 35100

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Question 1:

$$\text{Let } u = \begin{pmatrix} 1 \\ -1 \\ -2 \end{pmatrix}, v = \begin{pmatrix} -1 \\ 0 \\ 1 \end{pmatrix}, \text{ and } w = \begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix}$$

Are the vectors  $u$ ,  $v$ , and  $w$  linearly independent?

- 1.** Yes
- 2.** No

Question 2:

$$\text{Let } u = \begin{pmatrix} 1 \\ -1 \\ -2 \end{pmatrix}, v = \begin{pmatrix} -1 \\ 0 \\ 1 \end{pmatrix}, \text{ and } w = \begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix}$$

Write  $w$  as a linear combination of  $u$  and  $v$ .

In this linear combination, what is the coefficient of  $u$ ?

- A.** 1      **B.** 2      **C.** 3      **D.** 4      **E.**  $w$  is NOT a lin. comb. of  $u$  and  $v$
- F.**  $-1$     **G.**  $-2$     **H.**  $-3$     **I.**  $-4$     **J.** 0

Question 3:

$$\text{Let } p = \begin{pmatrix} 1 \\ 1 \\ 3 \end{pmatrix}, q = \begin{pmatrix} 1 \\ 0 \\ 1 \end{pmatrix}, \text{ and } r = \begin{pmatrix} 2 \\ 1 \\ 1 \end{pmatrix}$$

Are the vectors  $p$ ,  $q$ , and  $r$  linearly independent?

1. Yes
2. No

Question 4:

$$\text{Let } p = \begin{pmatrix} 1 \\ 1 \\ 3 \end{pmatrix}, q = \begin{pmatrix} 1 \\ 0 \\ 1 \end{pmatrix}, \text{ and } r = \begin{pmatrix} 2 \\ 1 \\ 1 \end{pmatrix}$$

Write  $r$  as a linear combination of  $p$  and  $q$ .

In this linear combination, what is the coefficient of  $p$ ?

**A.** 1      **B.** 2      **C.** 3      **D.** 4      **E.**  $r$  is NOT a lin. comb. of  $p$  and  $q$

**F.**  $-1$       **G.**  $-2$       **H.**  $-3$       **I.**  $-4$       **J.** 0