

Name: \_\_\_\_\_

R. Hammack

Score: \_\_\_\_\_

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**Directions:** Please answer all questions in the space provided. Use of calculators or any form of electronic communication device is strictly forbidden on this quiz.

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1. Find a basis for the space of solutions to the following homogeneous linear system.

$$\begin{cases} 3w + 3x + 15y + 15z = 0 \\ w - 3x + y - 3z = 0 \\ 2w + 3x + 11y + 12z = 0 \end{cases}$$