

Section 1.3 Part II: Vector Equations

MATH 204: Linear Algebra

Prepare for class September 5, 2018

Name (Print): _____

After reading Section 1.3 (pages 24-29), answer the following questions.

Note: Most texts that you will read represent a vector in boldface like this: \mathbf{v} . We cannot really write in boldface, so generally we write vectors by hand with arrows above them like this: \vec{v} .

1. State the definition of a linear combination of vectors.
2. In words, explain how you would determine whether or not a vector \mathbf{b} is a linear combination of three vectors \mathbf{a}_1 , \mathbf{a}_2 and \mathbf{a}_3 .
3. State the definition of a span of a set of vectors.
4. Explain what $\text{Span}\{\mathbf{v}\}$ and $\text{Span}\{\mathbf{u}, \mathbf{v}\}$ represent geometrically. Be careful to include any necessary qualifiers.