

## Part I (due Friday, February 16 at the beginning of class)

Read pages 129–131 of Section 7 of the Systems of Equations chapter in <https://scholarworks.gvsu.edu/books/21/>.

### Reading Questions

1. Activity 7.2.
2. In what other (math) contexts, if any, have you seen one-to-one and onto functions?

## Part II (prepare for Friday, February 16)

Finish the Linear Transformations handout.

## Part III: Homework (due Wednesday, February 21 at the beginning of class)

1. True or false? If true, prove; if false, give an explained counterexample.
  - (a) The range of a matrix transformation is the same as the codomain of the matrix transformation.
  - (b) If  $\vec{w}$  is in the range of a matrix transformation, then there is a vector  $\vec{x}$  such that  $T(\vec{x}) = \vec{w}$ .

## Running list of vocabulary words that could be a quiz word

- linear equation
- system of linear equations
- linear combination of a set of vectors
- span of a set of vectors
- linearly independent
- linearly dependent
- reduced row echelon form
- pivot
- homogeneous system
- free variable
- row equivalent

- consistent system
- inconsistent system
- trace of a matrix
- transpose of a matrix
- inverse of a matrix
- elementary matrix
- transformation
- domain
- codomain
- range