

Part I

No new part I this time.

Part II (due Wednesday, March 13)

There will be a **WeBWorK** assignment posted by Friday night.

Part III: Homework (due Friday, March 15 at the beginning of class)

1. True or False (if true, prove; if false, give an explained counterexample):
 - (a) There is a set of 17 linearly independent vectors in \mathbb{R}^{17} .
 - (b) There is a basis for $M_{2 \times 2}$ that consists of invertible matrices.
 - (c) Every basis for P_3 contains at least one polynomial of degree 2 or less.

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
- vector space (I will not ever ask you to define this on a quiz—the definition is way too long—but you should make sure you know what makes something a vector space)
- subspace
- basis
- finite-dimensional vector space