

Linear Algebra Packet

Know the following. If you don't know it, relearn it (you've done all this before).

- Vector manipulations in \mathbf{R}^3
 - Addition
 - Dot product and cross product
 - Multiplication by a scalar
 - (Simple) Geometric interpretation (a vector is a line segment, so $v\mathbf{t}$ is a line)
- Basic matrix operations (addition, multiplication, determinants)
 - Adding two matrices of size n by m
 - Multiplying an n by m matrix with an m by p matrix
 - Determinant of an n by n (*not* just 2 by 2!) matrix
- Solving a system of n equations with n unknowns using the elimination method
- Writing a system of n equations with n unknowns as a matrix equation

Come to the first day of class with the following.

- A good math joke (“good” is also fine)
- An example (application) of a 5th-dimensional vector
- One formal mathematical proof of your choice, rewritten in your own style, *that you fully understand* (one from, e.g., calculus or precalculus is fine)
- The air speed velocity of an unladen swallow