MATH 444: MATHEMATICAL RESEARCH AND WRITING Richard Anstee

Can we create/edit statements of a theorem with a critical eye. Consider what might need to be defined for the result. Are there supporting facts to be stated. Are hypotheses correct. Are conclusions correct? Don't expect your first draft to be perfect. These might be useful for Assignment 4. I have also used this as an in-person group exercise.

Try :

Pythagoras

Appolonius Theorem (concerning median)

Convexity: Intersection of convex sets is convex

Convexity: Minkowski 'difference' of two convex sets is convex

Fundamental Theorem of Arithmetic

Unique prime factorization

Bézout's Theorem

Rolle's Mean value theorem

Fundamental Theorem of Algebra

Euler's formula and e^{a+bi}

Nullity Theorem for matrix nullspace and rank

Orthogonal diagonalization of symmetric matrices.

Fundamental Theorem of Calculus

Expectation of a sum. Variance of a sum.

Bayes' Theorem

Definition of a tangent.

Theorem about Catalan numbers

Singular value decomposition