

MATH 133: Vectors, Matrices and Geometry

Written Assignment 1

**Due in tutorial or by Friday 1pm the week of Sept 22, 2003**

**Write the name of the tutor and tutorial section number**

**in the top right corner of the first page**

**Justify all of your assertions**

**Problem.** Using the properties of inner products, prove that the diagonals of a parallelogram are orthogonal if and only if the sides of the parallelogram are equal in length.