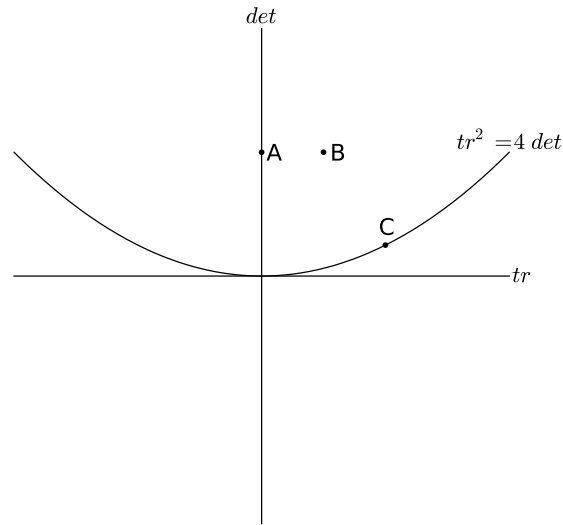# Math 3280 Worksheet 43

Group members (1 to 4): _____

    The purpose of this worksheet is to synthesize your understanding of two-dimensional linear systems of differential equations into a coherent whole by considering them in the trace-determinant plane.

(1) Construct a two by two matrix M whose trace and determinant could be at point A. Sketch the solutions to the system $x' = Mx$ by computing its eigenvalues and eigenvectors.

(2) Repeat the previous exercise for points B and C.