İzmir University of Economics, Department of Mathematics

MATH 205 ANALYTIC GEOMETRY **Quiz 6** 01.12.2004

Name **Student No.** **E-mail**

You will not get any points if your answer is wrong, that is no points to your explanations if your answer is wrong. And of course no points to a correct answer if your explanation or proof is not correct or clear.

YOU must write GOOD Mathematics

1. Use discriminant test to decide the type of the conic for the following equations;
   (a) $xy + y^2 - 3x = 5$,
   (b) $x^2 - 3xy + 3y^2 + 6y = 7$,
   (c) $x^2 - 4xy + 4y^2 - 5 = 0$.

2. Find parametric equations and a parameter interval for the motion of the particle that starts at $(a, 0)$ and traces the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$;
   (a) once clockwise,
   (b) twice counterclockwise.