

In The Name of God, The Compassionate, The Merciful

Name:

Student ID#:

**Statistical Pattern Recognition (CE-725)
Department of Computer Engineering
Quiz #9 (VC Dimension) - Spring 2011**

Q. Find the VC dimension of

1. $F = \{ax^3+bx^2+cx+d \mid a, b, c, d \in \mathbb{R}\}$, where $x \in \mathbb{R}$.
2. $F = \{ax^3+bx^2+cx+d \mid a, b, c, d \in \mathbb{R}, 4b^2-12ac \leq 0\}$, where $x \in \mathbb{R}$.