Name: UIN:

624 Sketch Recognition Quiz 7: October 8, 2014

- 1. (2 points) Compute the determinant for the following matrix: [4 3, 5 2]: 4 * 2 3 * 5 = -7
- 2. (2 points) Compute the cofactor for the following matrix: [4 3, 5 2]: [2, -5; -3,4]
- 3. (3 points) Compute the inverse of the following matrix [1 2 3, 0 4 5, 1 0 6]: 1/22(24 | -12 | -2; 5 | 3 | -5; -4 | 2 | 4)
- 4. (3 points) Compute the inverse of the following matrix [4 0 0, 0 9 0, 0 0 25]: 1/22(24 | -12 | -2; 5 | 3 | -5; -4 | 2 | 4)

Imagine that you have two classes male and female with the following data:

	age	height	length
male	30	68	2
female	32	62	8
stdev	10	3	5

Given the following equations:

$$v_{\hat{c}} = w_{\hat{c}0} + \sum_{i=1}^{F} w_{\hat{c}i} f_{i} \qquad 0 \le c < C \qquad w_{\hat{c}j} = \sum_{i=1}^{F} (\mathbf{\Sigma}^{-1})_{ij} \overline{f}_{\hat{c}i} \qquad 1 \le j \le F \qquad w_{\hat{c}0} = -\frac{1}{2} \sum_{i=1}^{F} w_{\hat{c}i} \overline{f}_{\hat{c}i}$$

- 5. (4 points) What is the equation for computing the value of fit for male? Wma= 30/100; wmh = 68/9; Wml=2/25; Wmo=-[30*30/100 + 68*68/9 + <math>4/25]/2 vm=-[30*30/100 + 68*68/9 + <math>4/25]/2 + 30a/100 + 68*h/9 + 2*1/25.
- 6. (4 points) What is the equation for computing the value of fit for female? vf=-[32*32/100 + 62*62/9 + 8*8/25]/2 + 32*a/100 + 62*h/9 + 8*1/25.
- 7. (2 points) What is the v_f and v_m for the data: age: 29, height 61, length: 6 vm=-[30*30/100+68*68/9+4/25]/2 + 30*29/100+68*61/9+2*6/25=208.6. vm=-261.47 + 30*29/100+68*61/9+2*6/25=208.6. vf=-[32*32/100+62*62/9+8*8/25]/2 + 32*29/100+62*61/9+8*6/25=211.46 vf=-219.96 + 32*29/100+62*61/9+8*6/25=211.46 female