

**Ubiquitous Computing**  
**Spring 2017**  
**Homework No. 7**  
**(Due on June 5)**

1. Use the example of anomaly detection. Decide if (30,24,29,27) is an anomaly. (10)
2. For the PCA example of p. 25, assume that (1,2), (2, 4), (3,5) are given. Obtain the new data after the reduction. (10)
3. Get SVD deposition for the following matrix. (15)  
$$A = \begin{bmatrix} 1 & 2 \\ 3 & -2 \end{bmatrix}$$
4. For deep learning example repeat one iteration with (0,1) input. (15)