Problem Set 3

1. The following table gives (with two values missing) the overall and group-wise cost of living indices (with the year 2000 as base) with six different expenditure groups and their respective weights, for the urban middle class people of a particular city, in 2004 and 2005.

Group	Weight	Group Index (2004)	Group Index (2005)
Food	350	117	120
Clothing and Footwear	156	113	118
Housing	187	118	—
Transport and vehicles	108	112	117
Durable household goods	76	102	111
Other items	123	121	125
Total	1000	—	119.5

   (a) Compute the overall cost of living index for 2004.

   (b) Hence determine the group index for housing for 2005.

   (c) If a person living with his family in the city spent an average of Rs. 5000 per month on food in 2004, and the food consumption pattern of his family remained the same, determine the average monthly increase in his expenditure on food in 2005 as compared to 2004.

   (d) If he saved 20% of his salary in 2004, determine the relative change in his average savings, relative to 2004, in 2005 if his salary increased by 10%, and he maintained the same standard of living as in 2004.

2. The following table shows the group indices and the corresponding weights for the year 1995 with 1981 as base (= 100) of a given commodity.

Group	Group Index	Weight
Food	212.45	65.3
Clothing	328.06	4.8
Fuel & Light	345.89	8.5
House Rent	173.41	7.6
Miscellaneous	201.35	13.8

(a) Find the Cost of Living Index Number for the year 1995.

(b) What is the purchasing power in 1995 as compared to 1981?

(c) If Mr. X's salary increased from Rs.2400 in 1981 to Rs.4950 in 1995, how has his economic status changed?

(d) If the weights are always proportional to the consumption expenditure for each of the first four groups and if Mr X can only adjust his spending on miscellaneous items, to come to terms with his income changes, then find his spending on each of the groups in 1995. What would be Mr. X's weights for each of the groups in 1995?