**Lpp**

Based on the results of the sensitivity analysis, we can conclude that there is no need to place a cap on the number of advertisements we can run in magazine A because doing so will allow us to reach the greatest number of potential customers with the least amount of money.

The permissible decrease for magazine C is 2, which means that there is no requirement to publish the fewest number of adverts there. In fact, increasing the number of advertisements in magazine C could result in us losing out on opportunities. But posting advertisements in other periodicals will increase the exposure to our customers.

The acceptable decline for magazine B is infinite, which means that there is no need to publish the fewest number of adverts possible because doing so could cost us opportunities. This information is obtained from a sensitivity analysis. However, we can increase customer visibility by running advertisements in A periodical.

We can increase the number of views we receive by spending more on advertising, but first we must analyse the ratio of advertising costs to expected profits before deciding whether to do so and how.

**Decision**

The sensitivity analysis makes it clear that we should only place adverts in Magazine A since it will provide us the best chance of reaching the 3,00,000 main consumers of expensive sporting goods. The exposure to large purchasers and readers varies by 6,000 and 40,000, respectively, with the same perentage 15%, even though the price difference between A and B is only 500. Cost-wise, A is the best option available, and C has the lowest reader with the lowest conversion rate.

**Transportation**

We can see from the sensitivity analysis that the shadow price for the Badlapur warehouse is -2, meaning that increasing the supply by one unit will reduce the cost by -2, and the permissible increase for the Badlapur warehouse is 150, meaning that we can increase the supply by 550 to 700.As a result, we can improve Badlapur's ability to decrease the Cost/Objective function.

From the sensitivity analysis, we can see that the shadow price for the Bhiwandi warehouse is 0, meaning that an increase in supply of one unit would not affect the Cost/Objective function, and the permissible increase is 150, meaning that we can increase supply from 400 to 550.In order to decrease the Cost/Objective function, we can expand the capacity of the Bhiwandi warehouse.

We can close the Thane Warehouse and supply from other warehouses by increasing the other capacity, which will lower our thane holding costs, because we can see from the sensitivity analysis that the allowable decrease for the Thane is infinite and there is no allowable increase, meaning that increasing the supply will have no impact on the Cost/Objective function as the Shadow price is zero.

**decision**

To reduce costs and meet the remaining demand from Badlapur and Bhiwandi, we will shut down the Thane warehouse supply and increase its capacity.