Demonstration Problem 3-5:

FCI owns 10 apartment building in a college town, which it rents exclusively to students. Each apartment building contains 100 rental units, but owner is having cash flow problems due to an average vacancy rate of nearly 50 percent. The apartments in each building have comparable floor plans, but some building are closer to campus than others. The owner of FCI has data from last year on the number of apartment rented, the rental price (in dollars), and the ammount spent on advertising (in hundreds of dollars) at each of 10 apartment.

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| --- | --- | --- | --- | --- |
| **Observation** | **Quantity** | **Price** | **Advertising** | **Distance** |
| 1 | 28 | 250 | 11 | 12 |
| 2 | 69 | 400 | 24 | 6 |
| 3 | 43 | 450 | 15 | 5 |
| 4 | 32 | 550 | 31 | 7 |
| 5 | 42 | 575 | 34 | 4 |
| 6 | 72 | 375 | 22 | 2 |
| 7 | 66 | 375 | 12 | 5 |
| 8 | 49 | 450 | 24 | 7 |
| 9 | 70 | 400 | 22 | 4 |
| 10 | 60 | 375 | 10 | 5 |

a). What is the estimated demand function for FCI’s rental unit?

b). If FCI raised rents at one complex by $100, what would you expect to happen to the number of units rented?

c). If FCI raised rents at average apartment building, what would happen to FCI’s total revenue?