Problem 3

* 350 Franchise: sum of Franchise rows
* 80000 Customer: sum of Member rows and Special Event (150 unique Customer per Franchise and 200 hosting Franchise Special Event) (50000 + 30000)
* Days per year: 365
* 521 Sales (products and services): sum of Merchandise, ServiceCategory and SpecialEvent (500 + 20 + 1)
* Fact table size is determined from sum of the rows in the Contains table and ServicePurchase table and SpecialEvents Sold. Thus, the Fact Table size 610,000 (450,000+100,000+60,000).
* Sparsity estimate:
  + 1 - ( fact table size / product of dimensions )
  + (1 – ( 610,000 / (350\*80000\*365) ) = 0.9999403