# Sparsity Calculation

Count Customer: 3000

Count Location: 5

Count Sales Agent: 50

Count Job: 50.000 / year

Count Subjob: 250.000 / year (estimate)

Count Shipment: 1.250.000 / year

Count Invoice: 500.000 / year

Count Date: 365

Count Sales Class: 6

Count Lead: 125.000 / year

Count Fact Sales Summary: 150 / year

Count Fact Invoice: 500.000 / year

Count Fact Lead: 125.000 / year

Count Fact Order: 100.000 (based on jobs)

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| **Cube** | **Grain** | **Unadjusted Size** | **Sparsity** |
| Monthly Sales Summary | Date (month), Location | 12 (months) \* 5 (locations) \* 6 (sales class) = 360 | 1 – (150 / 360) = 0.59 |
| Invoice | Date, Customer | 365 (days) \* 3000 (customers) \* 5 (locations) \* 6 (sales agents) = 32 850 000 | 1 – (50000 / 32 850 000) = 0,998478 |
| Lead | Date, Lead, Customer, Location | 365 (days) \* 3000 (customers) \* 125.000 (leads) \* 5 (locations) \* 50 (sales agents) \* 6 (sales classes) 3 285 000 000 000 | 1 – (125000 / Unajusted Size) = 0.999999 |
| Order | Date, Customer, Location | 365 (days) \* 3000 (customers) \* 10000 (locations) \* 50 (sales agents) \* 6 (sales classes) = 3 250 000 000 000 | 1 - (50.000 / Unajusted Size) = 0.999999 |
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