**CE 5585: Transport Policy and Planning**

**Due Friday, September 7, 2018**

**Problem 1:** Using the data provided in Table 1, proof that whether there is a relationship between:

1. HH income and trips per HH
2. Cars per HH and trips per HH

**Problem 2:** Using the data provided in Table 1, create matrix that shows number & percentage of HHs as function of HH attributes.

**Problem 3:** Using the data provided in Table 1, create matrix that shows average number of trips per HH versus HH attributes.

**Problem 4:** Using the data provided in Table 1 & 2, estimate trip productions?

**Table 1: Socioeconomic and Employment Data from the US Census**

|  |  |  |  |
| --- | --- | --- | --- |
| **HH Number** | **Trips per HH** | **HH Income ($1000s)** | **Cars/HH** |
| 1 | 2 | 16 | 0 |
| 2 | 4 | 24 | 0 |
| 3 | 10 | 68 | 2 |
| 4 | 5 | 44 | 0 |
| 5 | 5 | 18 | 1 |
| 6 | 15 | 68 | 3 |
| 7 | 7 | 38 | 1 |
| 8 | 4 | 36 | 0 |
| 9 | 6 | 28 | 1 |
| 10 | 13 | 76 | 3 |
| 11 | 8 | 72 | 1 |
| 12 | 6 | 32 | 1 |
| 13 | 9 | 28 | 2 |
| 14 | 11 | 44 | 2 |
| 15 | 10 | 44 | 2 |
| 16 | 11 | 52 | 2 |
| 17 | 12 | 60 | 2 |
| 18 | 8 | 44 | 1 |
| 19 | 8 | 52 | 1 |
| 20 | 6 | 28 | 1 |

**Table 2: Socioeconomic and Employment Data from the US Census**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Zone | Households | Income | Cars | Size | Workers | Office space (ft2) | Retail space (ft2) |
| 1 | 23,000 | 30,000 | 1.4 | 2.1 | 1.4 | 2.00E+06 | 5.00E+06 |
| 2 | 35,000 | 25,000 | 1.8 | 2.2 | 1.6 | 3.00E+06 | 1.50E+07 |
| 3 | 85,000 | 55,000 | 2.5 | 2.3 | 1.5 | 1.00E+07 | 1.00E+07 |
| 4 | 15,000 | 85,000 | 1.1 | 1.5 | 1.3 | 2.50E+07 | 2.00E+07 |