Reg lab 2

例 2.2/4.5 城镇人均收支分析

```
y \leftarrow c(1278.89, 1453.8, 1671.7, 2110.8, 2851.3, 3537.57, 3919.5, 4185.6, 4331.6, 4615.9, 4998, 530
x \leftarrow c(1510.16, 1700.6, 2026.6, 2577.4, 3496.2, 4282.95, 4838.9, 5160.3, 5425.1, 5854, 6279.98, 68
```

- 1. 用最小二次乘法做一元线性回归
- 2. 计算 DW 值和 ρ 值,并判断误差项是否存在自相关
- 3. 用迭代法消除自相关
- 4. 用差分法消除自相关
- 5. 利用前两位所得方程做预测

例 5.2/3.1 城镇居民消费因素分析

```
x1 <- c(7535,7344,4211,3856,5463,5809,4635,4687,9656,6658,7552,5815,7317,5072,5201,4607,5838,5442, x2 <- c(2639,1881,1542,1529,2730,2042,2045,1807,2111,1916,2110,1541,1634,1477,2197,1886,1783,1625, x3 <- c(1971,1854,1502,1439,1584,1433,1594,1337,1790,1437,1552,1397,1754,1174,1572,1191,1371,1302, x4 <- c(1658,1556,1047,906,1354,1310,1448,1181,1017,1058,1228,1143,773,671,1005,1085,1030,918,1048 x5 <- c(3696,2254,1204,1506,1972,1844,1643,1217,3724,3078,2997,1933,2105,1487,1656,1525,1652,1738, x6 <- c(84742,61514,38658,44236,46557,41858,38407,36406,78673,50639,50197,44601,44525,38512,41904, x7 <- c(87475,93173,36584,33628,63886,56649,43415,35711,85373,68347,63374,28792,52763,28800,51768, x8 <- c(106.5,107.5,104.1,108.8,109.6,107.7,111,104.8,106,112.6,104.5,105.3,104.6,106.7,106.9,106. x9 <- c(1.3,3.6,3.7,3.3,3.7,3.6,3.7,4.2,3.1,3.1,3,3.7,3.6,3,3.3,3.1,3.8,4.2,2.5,3.4,2,3.3,4,3.3,4, y <- c(24046,20024,12531,12212,17717,16594,14614,12984,26253,18825,21545,15012,18593,12776,15778,1
```

- 1. 计算相关系数矩阵
- 2. 对全模型做线性回归拟合
- 3. 分别使用前进法,后退法,逐步回归法筛选变量, $\alpha = 0.05$