Problem 4:
(d) The following matrix gives the Pi_ij's for each pair of states:

	WA	OR	CA	ID	MT	WY
WA	----	0.035305	0.060976	0.030063	0.056259	0.035747
OR	0.035305	----	0.090083	0.044495	0.083137	0.05289
CA	0.060976	0.090083	----	0.076785	0.142977	0.091204
ID	0.030063	0.044495	0.076785	----	0.070855	0.045052
MT	0.056259	0.083137	0.142977	0.070855	----	0.084172
WY	0.035747	0.05289	0.091204	0.045052	0.084172	----

The corresponding Pi_i's are:

WA	OR	CA	ID	MT	WY
0.2183500	0.3059108	0.4620239	0.2672496	0.4374006	0.3090651

(e) The following R output gives the combinations of two states that are sampled, the estimated total number of counties in 6 states, variance of the estimated total, and the standard error of the estimated total:

```
> Output
       State1     State2          t.hat.HT     V.hat.HT.tHT           SE.tHT
1  Washington     Oregon 296.293707276499 15800.6259245712 125.700540669367
2  Washington California 304.146955678056 18739.7160282516 136.893082470414
3  Washington      Idaho 343.252455596938 17125.3674103816 130.863927078403
4  Washington    Montana 308.927639427632 18252.6778716044 135.102471744985
5  Washington    Wyoming 253.030294897548 16962.0818034141 130.238557283986
6      Oregon California 243.216006386813 9684.79571476314 98.4113596835403
7      Oregon      Idaho 282.321506305694 13250.1774255491  115.10941501697
8      Oregon    Montana 247.996690136388 9820.11292507238 99.0964829096996
9      Oregon    Wyoming 192.099345606304  6541.3315438973  80.878498650119
10 California      Idaho 290.174754707252 15772.3316767062 125.587943994263
11 California    Montana 255.849938537946 11268.5150384215 106.153262024403
12 California    Wyoming 199.952594007862 7019.77357177425 83.7840890132145
13      Idaho    Montana 294.955438456827 15475.3416969717 124.399926434752
14      Idaho    Wyoming 239.058093926743 13477.7116733995 116.093547079067
15    Montana    Wyoming 204.733277757438 7503.14228603027 86.6206804754516
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