3.1

```
Execution finished without errors.
Result: query executed successfully. Took 331ms
At line 1:
CREATE TEMP TABLE owner_year_month AS
SELECT
    card_no,
    substr(date, 1, 4) AS year,
    substr(date, 6, 2) AS month,
    SUM(spend) AS spend,
    SUM(items) AS items
FROM owner_spend_date
```

3.2

	year	month	Total Spend
1	2015	05	2934261.76
2	2012	04	2887161.14
3	2014	05	2885980.68
4	2012	05	2846709.99
5	2013	03	2845232.38

Month	Average Spend By Month
01	232.02
02	212.3
03	222.95
04	224.73
05	234.33
06	215.97
07	218.44
08	215.65
09	214.54
10	220.64
11	227.56
12	235.02

3.3

zip	total_spend
55405	18481598.3
55408	16844354.55
55403	10303084.8

3.4

3.5

	Month	Average Spend 55405	Average Spend 55408	Average Spend 55403
1	01	232.02	225.57	200.28
2	02	212.3	212.94	185.76
3	03	222.95	223.2	195.98
4	04	224.73	221.46	194.83
5	05	234.33	228.3	199.12
6	06	215.97	209.06	190.91
7	07	218.44	213.95	194.9
8	08	215.65	212.93	191.68
9	09	214.54	212.64	188.82
10	10	220.64	218.95	195.56
11	11	227.56	227.74	201.08
12	12	235.02	228.65	206.96

3.6

	owners	years	months	avg_spend	avg_items	avg_item_price
1	27107	8	12	270.07	70.3	3.84

	owners	spend_k
1	2530	1621.6

3.7

3.8

	card_no	total_spend	avg_spend_transaction	num_shopping_dates	total_trans	last_visit
1	18736	32863.86	49.6320338983051	590	682	2017-01-24

	card_no	total_spend	avg_spend_transaction	num_shopping_dates	total_trans	last_visit	last_spend
1	18736	32863.86	49.6320338983051	590	682	2017-01-24	115.99

```
/*
1. The first query took 177ms and the second took 8ms
2. The first query uses owner_recent table, which needs to be recreated with each query (SELECT
statement. Whereas the second query uses a view that does not need to be recreated with each query.
*/
```

3.9

	card_no	total_spend	avg_spend_transaction	num_shopping_dates	total_trans	last_visit	last_spend
1	22257	52571.02	126.6607421875	384	437	2016-01-02	35.97
2	50054	51054.45	96.30321197411	515	540	2016-10-19	16.43
3	12090	36323.46	99.3550862068965	348	381	2016-10-13	21.62
4	21141	29757.3	94.8760068259386	293	328	2016-10-21	17.56
5	20587	37269.94	112.72158974359	325	340	2016-04-30	35.41
6	24073	37840.95	104.428235119048	280	393	2016-10-23	34.23
7	24783	41755.66	122.607975460123	326	354	2016-08-29	54.75
8	16465	30115.29	91.8459090909091	286	342	2016-10-28	30.84
9	13024	32767.38	103.82949044586	314	318	2015-12-03	43.56
10	18314	28765.35	71.7433974358974	390	407	2016-08-15	13.97
11	10959	31894.48	73.3301346001584	421	449	2016-07-28	19.33
12	10762	28955.45	77.9434968210717	367	377	2016-11-16	24.08
13	16552	31919.01	85.2319426751592	314	418	2016-11-22	32.56
14	16201	24097.49	61.8067473884141	351	405	2016-04-02	10.45

Execution finished without errors.