```
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
```

3.1

	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	

24	GROTI	IPRV owner wear month month
	Month	Average Spend By Month
1	01	232.02
2	02	212.3
3	03	222.95
4	04	224.73
5	05	234.33
6	06	215.97
7	07	218.44
8	08	215.65
9	09	214.54
10	10	220.64
11	11	227.56
12	12	235.02
	,	

zip total\_spend
1 55405 18481598.3
2 55408 16844354.55
3 55403 10303084.8

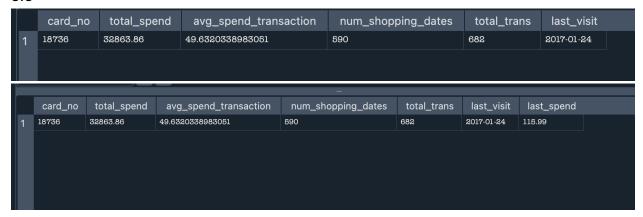
## 3.5

	_			-	
	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	

ownersyearsmonthsavg_spendavg_itemsavg_item_price127107812270.0770.33.84
1 27107 8 12 270.07 70.3 3.84
11.22



## 3.8



/\*

- 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.

						-	
	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	364	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	361	405	2016-04-02	10.45
Execut	Execution finished without errors.						