

1A. Write a SAS program to graph the following using the permanent data set HW1:

- i. The frequency of the regions.
- ii. The percentage of visits.
- iii. The frequency of visits for each region.
- iv. The frequency of regions for each visit.
- v. The sum of sales for each region.
- vi. The sum of expenses for each region
- vii. The block chart of mean of sale for each region by visit.

1B. Write a SAS program to perform the following using the permanent data set HW1:

- i. Find and print Only North east Region – All variables
- ii. Find and print Number of Visits from Regional manager is not 5 – All variables
- iii. Gross Sales for Last Quarter is larger than 700000 and Advertising Expenses for Last Quarter is less than 5000 – All variables
- iv. Only Southeast Region – State name and Region
- v. All States except the ones that start with M and N and T.

1C. Write a SAS program to print the following using the permanent data set HW1:

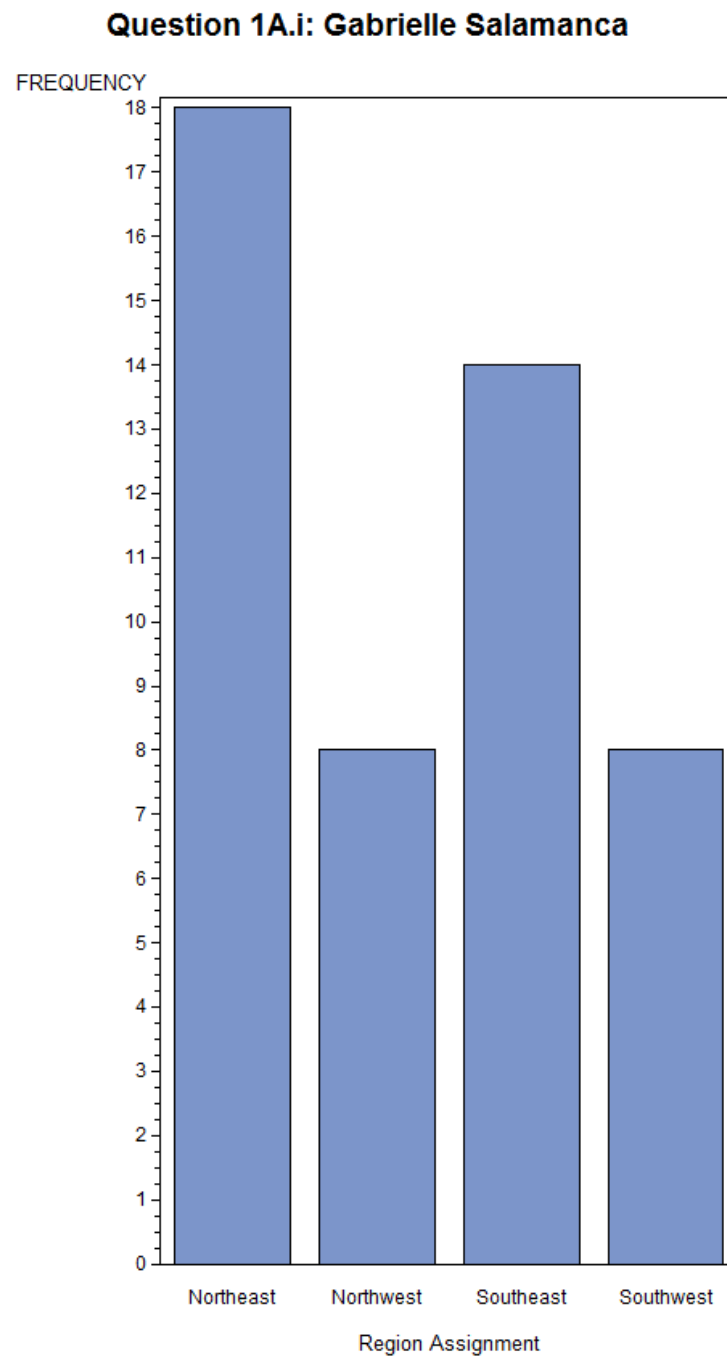
- i. For each region, how many salesmen are in each state, what are the advertising expenditures for each state (in ascending order), and what is the total advertising expenditure for the region
- ii. How many states were visited 1, 2, 3, 4, and 5 times by their regional manager?

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/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hwl;
vbar region;
title 'Question 1A.i: Gabrielle Salamanca';
run;
/*****/

quit;

```



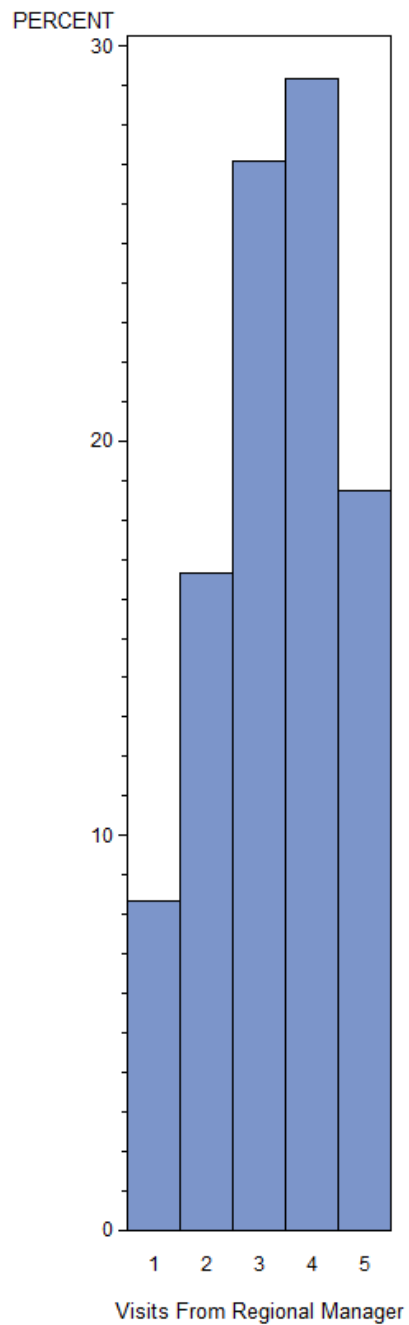
```

/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hwl;
vbar visits / discrete space = 0 type = percent;
title 'Question 1A.ii: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1A.ii: Gabrielle Salamanca



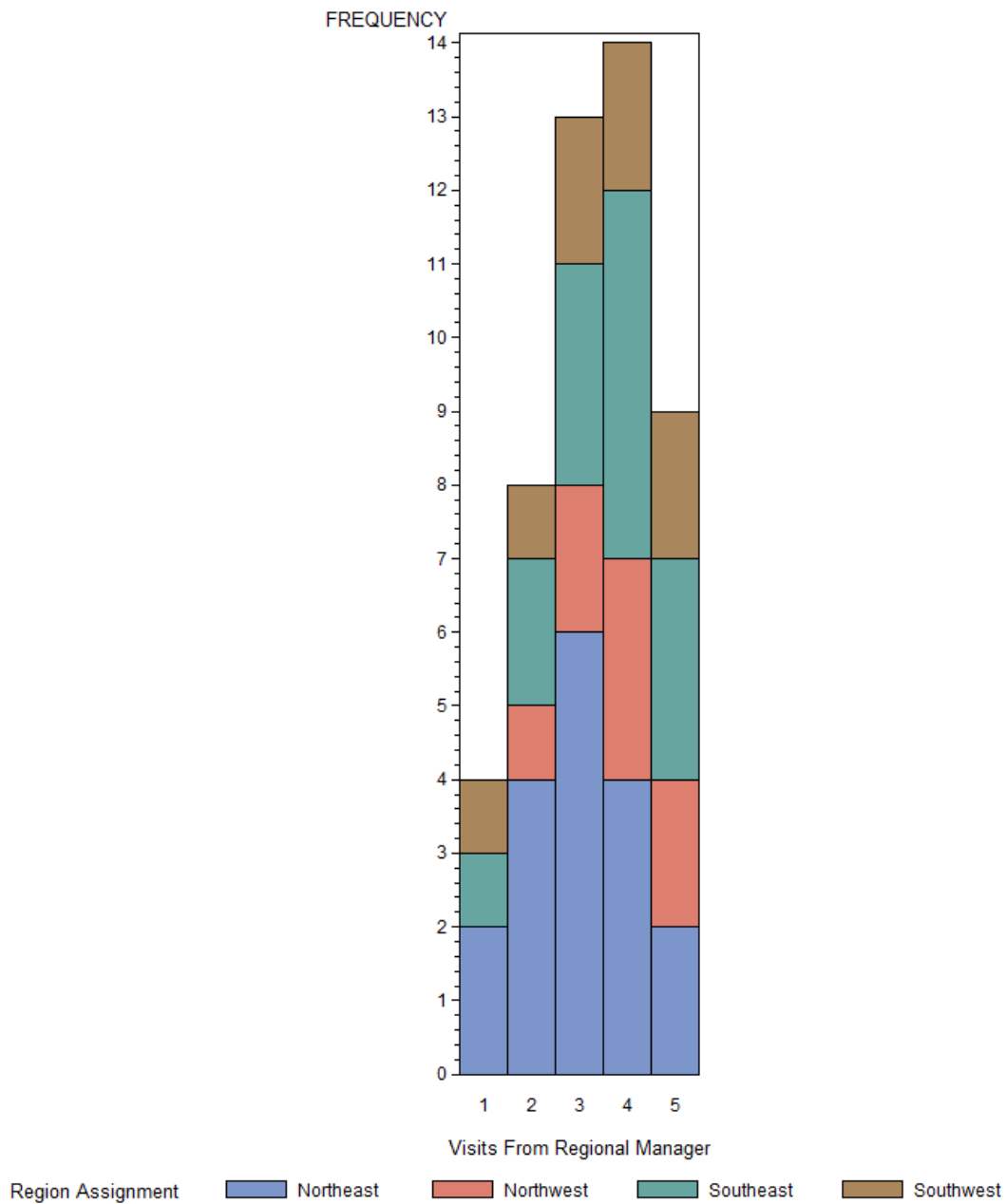
```

/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hwl;
vbar visits / discrete space = 0 subgroup = region;
title 'Question 1A.iii: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1A.iii: Gabrielle Salamanca



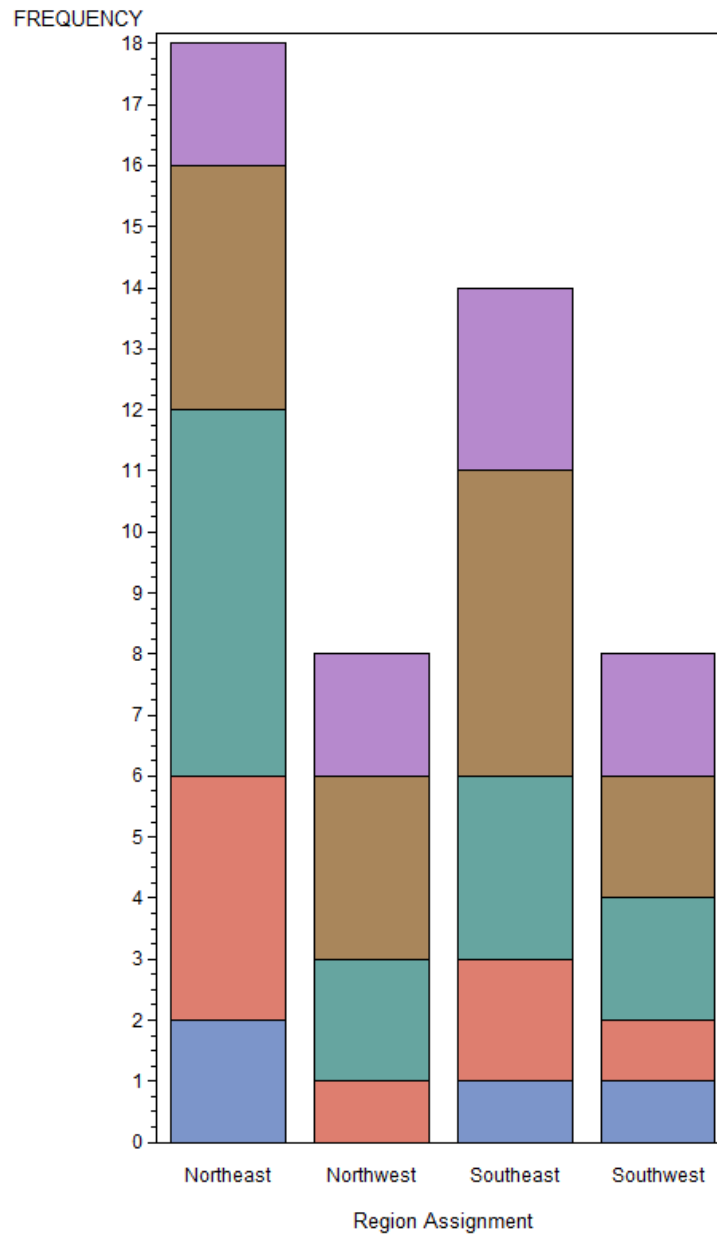
```

/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hw1;
vbar region / subgroup = visits;
title 'Question 1A.iv: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1A.iv: Gabrielle Salamanca



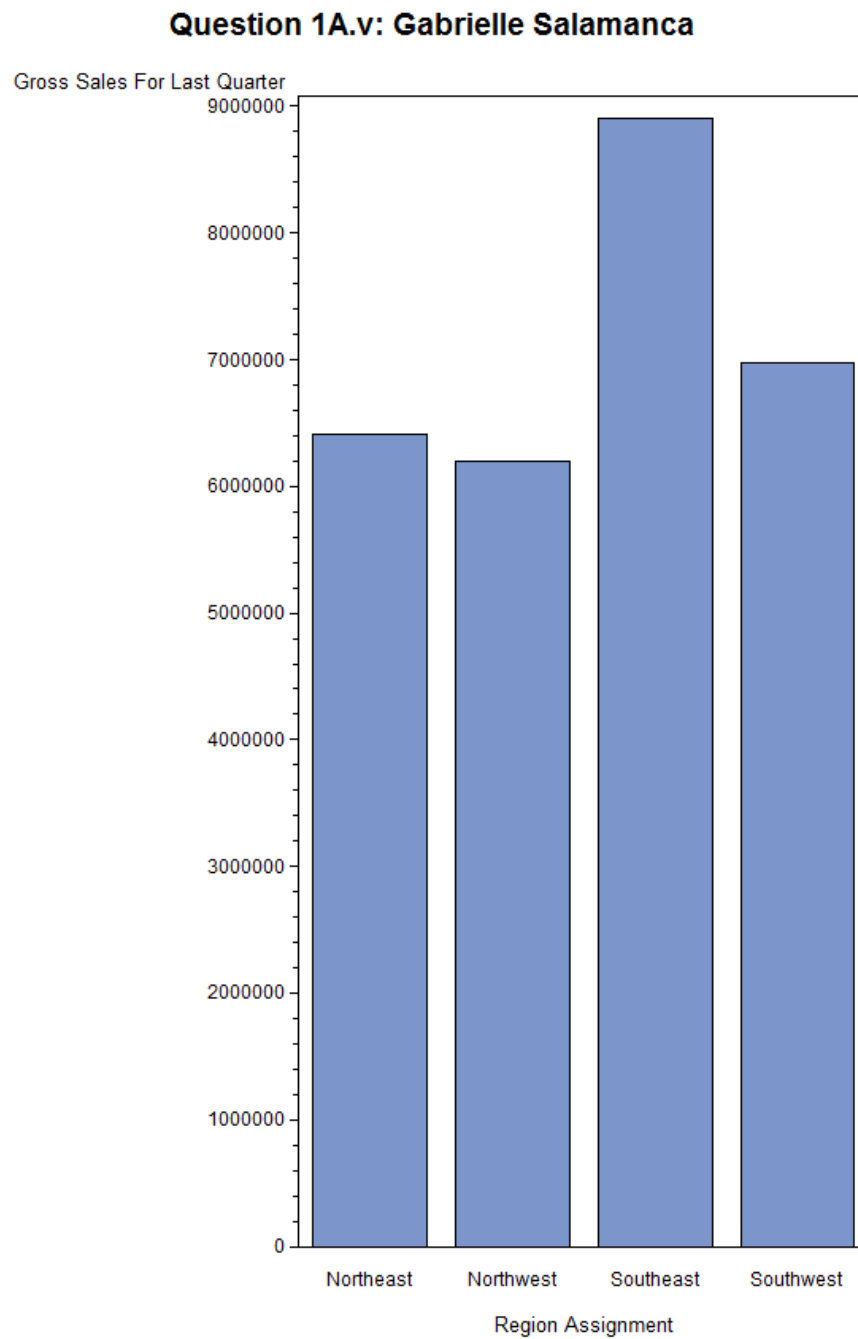
Visits From Regional Manager 1 2 3 4 5

```

/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hwl;
vbar region / sumvar = sale;
title 'Question 1A.v: Gabrielle Salamanca';
run;
/*****/

quit;

```



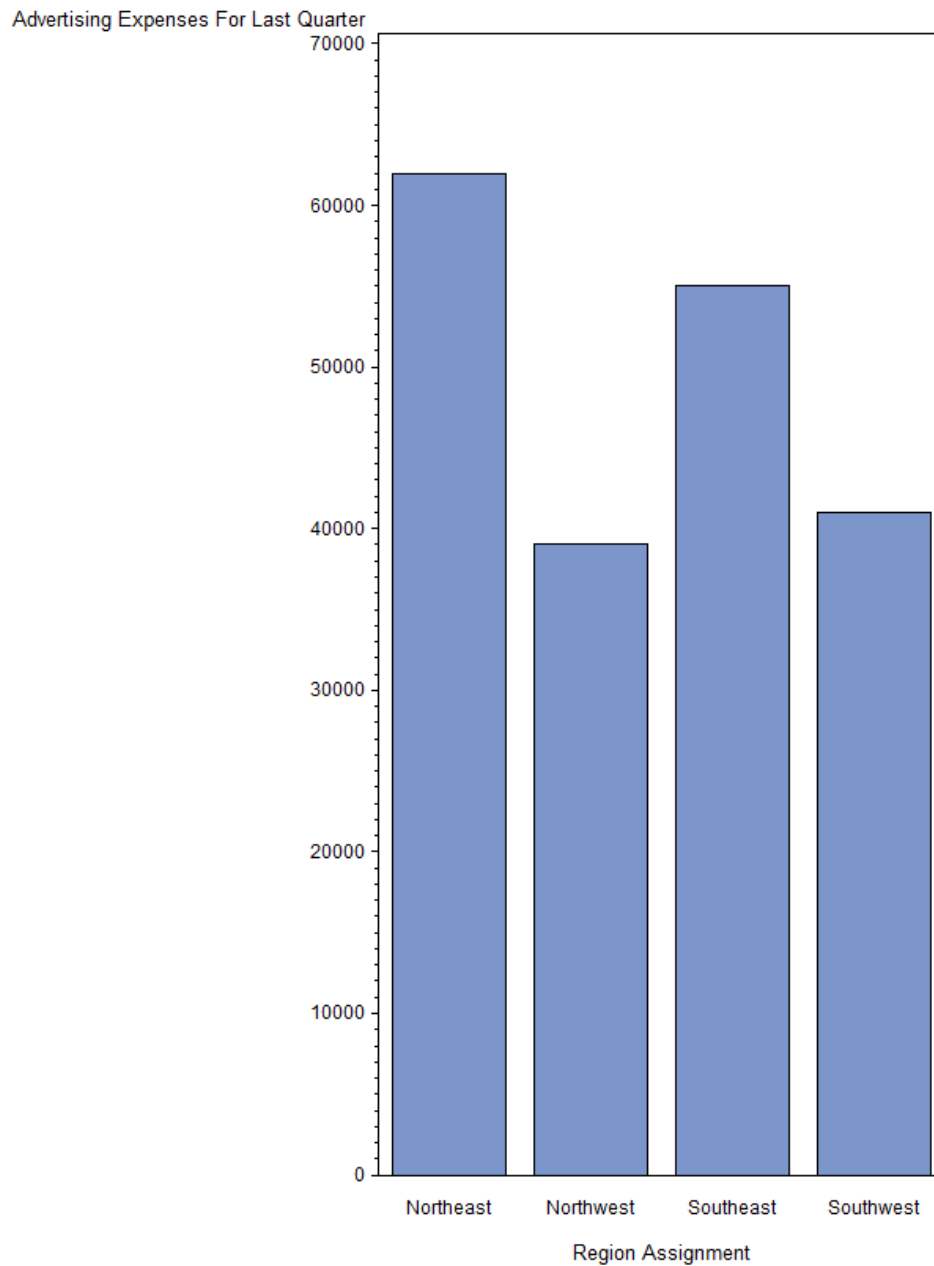
```

/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hwl;
vbar region / sumvar = expenses;
title 'Question 1A.vi: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1A.vi: Gabrielle Salamanca



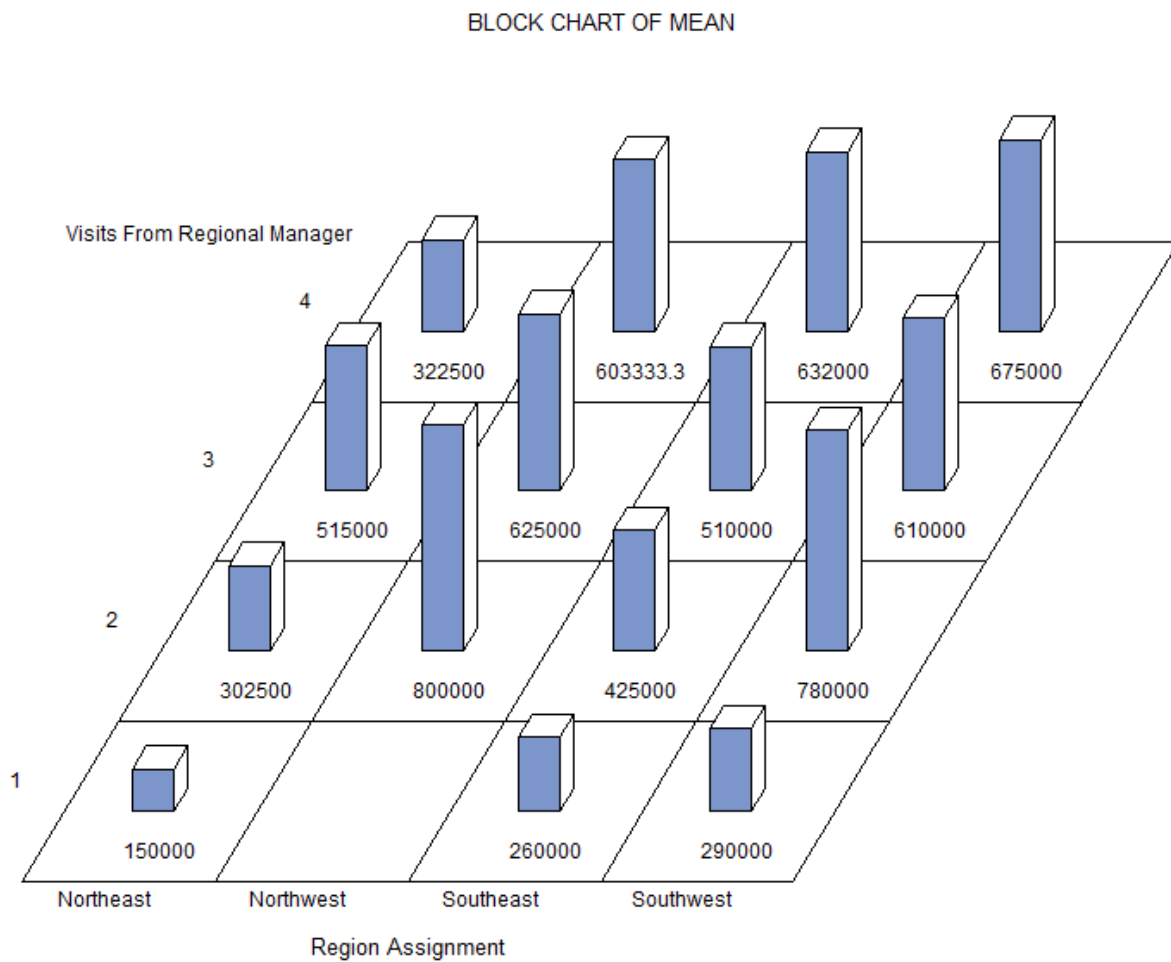
```

/***** Q1A ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
proc gchart data = datain.hw1;
block region / group = visits sumvar = sale type = mean;
title 'Question 1A.vii: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1A.vii: Gabrielle Salamanca




```

/***** Q1B ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data northeast;
set datain.hwl;
if region = 'Northeast' then output;
run;
/*****/
proc print data = northeast;
title 'Question 1B.i: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1B.i: Gabrielle Salamanca

Obs	state	region	visits	salesman	sale	expenses
1	Delaware	Northeast	1	1	120000	1000
2	Rhode Island	Northeast	1	1	180000	1000
3	Idiana	Northeast	2	2	340000	2000
4	Maine	Northeast	2	1	300000	1000
5	New Hampshire	Northeast	2	2	290000	1000
6	Vermont	Northeast	2	2	280000	1000
7	Connecticut	Northeast	3	1	530000	3000
8	Maryland	Northeast	3	3	600000	4000
9	Massachusetts	Northeast	3	2	510000	5000
10	New Jersey	Northeast	3	3	520000	6000
11	Ohio	Northeast	3	4	450000	5000
12	Pennsylvania	Northeast	3	5	480000	6000
13	Iowa	Northeast	4	2	360000	3000
14	Michigan	Northeast	4	4	300000	6000
15	Minnesota	Northeast	4	3	320000	2000
16	Wisconsin	Northeast	4	3	310000	3000

```

/***** Q1B ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data regional;
set datain.hwl;
if visits = 5 then delete;
title 'Question 1B.ii: Gabrielle Salamanca';
run;
/*****/
proc print data = regional;
title 'Question 1B.ii: Gabrielle Salamanca';
run;
/*****/

quit;

```

Question 1B.ii: Gabrielle Salamanca

Obs	state	region	visits	salesman	sale	expenses
1	Delaware	Northeast	1	1	120000	1000
2	Rhode Island	Northeast	1	1	180000	1000
3	West Virginia	Southeast	1	1	260000	2000
4	Nevada	Southwest	1	1	290000	1000
5	Idiana	Northeast	2	2	340000	2000
6	Maine	Northeast	2	1	300000	1000
7	New Hampshire	Northeast	2	2	290000	1000
8	Vermont	Northeast	2	2	280000	1000
9	Nebraska	Northwest	2	3	800000	2000
10	Kentucky	Southeast	2	1	390000	2000
11	Virginia	Southeast	2	3	460000	4000
12	Utah	Southwest	2	3	780000	6000
13	Connecticut	Northeast	3	1	530000	3000
14	Maryland	Northeast	3	3	600000	4000
15	Massachusetts	Northeast	3	2	510000	5000
16	New Jersey	Northeast	3	3	520000	6000
17	Ohio	Northeast	3	4	450000	5000
18	Pennsylvania	Northeast	3	5	480000	6000
19	Oregon	Northwest	3	4	600000	5000
20	Washington	Northwest	3	4	650000	6000
21	Arkansas	Southeast	3	1	520000	1000
22	Lousiana	Southeast	3	2	480000	4000
23	Missouri	Southeast	3	3	530000	5000
24	New Mexico	Southwest	3	2	680000	4000
25	Oklahoma	Southwest	3	3	540000	4000
26	Iowa	Northeast	4	2	360000	3000
27	Michigan	Northeast	4	4	300000	6000
28	Minnesota	Northeast	4	3	320000	2000
29	Wisconsin	Northeast	4	3	310000	3000
30	Idaho	Northwest	4	3	600000	2000
31	Montana	Northwest	4	2	620000	3000
32	Wyoming	Northwest	4	2	590000	5000
33	Alabama	Southeast	4	2	600000	4000
34	Arizona	Southeast	4	3	810000	5000
35	Georgia	Southeast	4	2	580000	2000
36	Mississippi	Southeast	4	2	620000	4000
37	Tennessee	Southeast	4	2	550000	3000
38	Colorado	Southwest	4	3	650000	4000
39	Kansas	Southwest	4	3	700000	4000

```

/***** Q1B ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data equality;
set datain.hwl;
if sale > 700000 and expenses < 5000 then output;
run;
/*****/
proc print data = equality;
title 'Question 1B.iii: Gabrielle Salamanca';
run;
/*****/
quit;

```

Question 1B.iii: Gabrielle Salamanca						
Obs	state	region	visits	salesman	sale	expenses
1	Nebraska	Northwest	2	3	800000	2000

```

/***** Q1B ** Gabrielle Salamanca *****/
option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data southeast;
set datain.hwl;
if region = 'Southeast' then output;
run;
/*****/
proc sort data = southeast;
by region;
run;
/*****/
proc print data = southeast label noobs;
var region state;
title 'Question 1B.iv: Gabrielle Salamanca';
run;
/*****/
quit;

```

Question 1B.iv: Gabrielle Salamanca

Region Assignment	State Name
Southeast	West Virginia
Southeast	Kentucky
Southeast	Virginia
Southeast	Arkansas
Southeast	Louisiana
Southeast	Missouri
Southeast	Alabama
Southeast	Arizona
Southeast	Georgia
Southeast	Mississippi
Southeast	Tennessee

```

option nodate;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data states;
set datain.hwl;
if first(left(state))='M' then delete;
if first(left(state))='N' then delete;
if first(left(state))='T' then delete;
run;
/*****/
proc print data = states;
var state;
title 'Question 1B.v: Gabrielle Salamanca';
run;
/*****/
quit;

```

Question 1B.v: Gabrielle Salamanca

Obs	state
1	Delaware
2	Rhode Island
3	West Virginia
4	Idiana
5	Vermont
6	Kentucky
7	Virginia
8	Utah
9	Connecticut
10	Ohio
11	Pennsylvania
12	Oregon
13	Washington
14	Arkansas
15	Lousiana
16	Oklahoma
17	Iowa
18	Wisconsin
19	Idaho
20	Wyoming
21	Alabama
22	Arizona
23	Georgia
24	Colorado
25	Kansas

```

/***** Q1C ** Gabrielle Salamanca *****/
option nodate pagesize=50;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data regions;
set datain.hwl;
run;
/*****/
proc sort data = regions;
by region descending expenses;
run;
/*****/
proc print data = regions label noobs;
by region;
var state salesman expenses;
sum expenses;
title 'Question 1C.i: Gabrielle Salamanca';
run;
/*****/
quit;

```

Question 1C.i: Gabrielle Salamanca

----- Region Assignment=Northeast -----

State Name	Number Of Salesmen	Advertising Expenses For Last Quarter
New Jersey	3	6000
Pennsylvania	5	6000
Michigan	4	6000
Massachusetts	2	5000
Ohio	4	5000
Maryland	3	4000
Connecticut	1	3000
Iowa	2	3000
Wisconsin	3	3000
Indiana	2	2000
Minnesota	3	2000
Delaware	1	1000
Rhode Island	1	1000
Maine	1	1000
New Hampshire	2	1000
Vermont	2	1000
-----	-----	-----
region		50000

----- Region Assignment=Northwest -----

State Name	Number Of Salesmen	Advertising Expenses For Last Quarter
Washington	4	6000
Oregon	4	5000
Wyoming	2	5000
Montana	2	3000
Nebraska	3	2000
Idaho	3	2000
-----	-----	-----
region		23000

Question 1C.i: Gabrielle Salamanca

----- Region Assignment=Southeast -----

State Name	Number Of Salesmen	Advertising Expenses For Last Quarter
Missouri	3	5000
Arizona	3	5000
Virginia	3	4000
Louisiana	2	4000
Alabama	2	4000
Mississippi	2	4000
Tennessee	2	3000
West Virginia	1	2000
Kentucky	1	2000
Georgia	2	2000
Arkansas	1	1000
-----	-----	-----
region		36000

----- Region Assignment=Southwest -----

State Name	Number Of Salesmen	Advertising Expenses For Last Quarter
Utah	3	6000
New Mexico	2	4000
Oklahoma	3	4000
Colorado	3	4000
Kansas	3	4000
Nevada	1	1000
-----	-----	-----
region		23000
-----	-----	-----
		132000

```

/***** Q1C ** Gabrielle Salamanca *****/
option nodate pagesize=70;
libname datain '\\Client\D$\M338 SAS\Data Files';
/*****/
data visiting;
set datain.hwl;
run;
/*****/
proc sort data = visiting;
by visits;
run;
/*****/
proc print data = visiting label noobs;
by visits;
var state;
title 'Question 1C.ii: Gabrielle Salamanca';
run;
/*****/
quit;

```

Question 1C.ii: Gabrielle Salamanca

----- Visits From Regional Manager=1 -----

State Name

Delaware
Rhode Island
West Virginia
Nevada

----- Visits From Regional Manager=2 -----

State Name

Idiana
Maine
New Hampshire
Vermont
Nebraska
Kentucky
Virginia
Utah

Question 1C.ii: Gabrielle Salamanca

----- Visits From Regional Manager=3 ----- Visits From Regional Manager=4 -----

State Name

Connecticut
Maryland
Massachusetts
New Jersey
Ohio
Pennsylvania
Oregon
Washington
Arkansas
Louisiana
Missouri
New Mexico
Oklahoma

State Name

Iowa
Michigan
Minnesota
Wisconsin
Idaho
Montana
Wyoming
Alabama
Arizona
Georgia
Mississippi
Tennessee
Colorado
Kansas