```
/* x5_2.sas */
/* Purpose:  */

title1 'Example 5.2.';

data a;
retain gent 0;
input a b c d;
gent=gent+1;
x=a; prod='A'; output;
x=b; prod='B'; output;
x=c; prod='C'; output;
x=d; prod='D'; output;
keep x gent prod;
cards;
3210 3225 3220 3545
3000 3320 3410 3600
3315 3165 3320 3580
.    3145 3370 3485
;

proc print data=a;
title 'List of data.';

proc glm data=a;
  class prod;
  model x=prod;
  means prod;
title2 'Analysis using GLM.';

data b;
  set a;
  x=(x-3000)/5;

proc print data=b;
title2 'List of data - coded.';

proc glm data=b;
  class prod;
  model x=prod;
  means prod;
title2 'Analysis of coded data using GLM.';

run;
```

List of data. 1

Obs	gent	x	prod
1	1	3210	A
2	1	3225	B
3	1	3220	C
4	1	3545	D
5	2	3000	A
6	2	3320	B
7	2	3410	C
8	2	3600	D
9	3	3315	A
10	3	3165	B
11	3	3320	C
12	3	3580	D
13	4	.	A
14	4	3145	B
15	4	3370	C
16	4	3485	D

/><><>

List of data. 5
List of data - coded.

Obs	gent	x	prod
1	1	42	A
2	1	45	B
3	1	44	C
4	1	109	D
5	2	0	A
6	2	64	B
7	2	82	C
8	2	120	D
9	3	63	A
10	3	33	B
11	3	64	C
12	3	116	D
13	4	.	A
14	4	29	B
15	4	74	C
16	4	97	D

/><><>