```
/************主教材各章例题SAS程序********/
/***例10-1, 单样本秩和检验*********/
data a10 1;
 input x@@;
  median=18.9;
  d=x-median;
cards;
0
0
0
0
0
12.4
34.1
69
98.4
129.5
156.1
163.5
170.9
177.6
172.4
180.3
189.2
192.2
196.8
205.3
proc univariate;
 var d;
run;
/***例10-2, 配对秩和检验*********/
data a10 2;
input x1 x2 @@;
d=x1-x2;
cards;
15 16
14 12
8 5
17 19
20 16
10 13
22 9
15 15
13 46
proc univariate;
var d;
run;
```

```
/***例10-3, 两组定量资料秩和检验*********/
data a10_3;
 input group ca@@;
cards;
1 1843
1
  383
1
  406
   334
1
1
  443
1
  676
   771
1
   358
   607
   484
2
  842
2
   336
2
  742
2 1367
2 1623
2
  597
2 1976
2 1818
2
  643
2 4534
proc univariate normal;
 class group;
 var ca;
run;
proc npar1way wilcoxon;
 class group;
 var ca;
run;
/***例10-4,两组计量资料秩和检验********/
data a10 4;
 input group score@@;
cards;
1 0
                 1
                    4 1
        2
           1
               3
                    5
   0
      1
                 1
                       1
                          6
        2
     1
           1
               3
                 1
                       1
                          7
       2
1
   0
     1
           1
               3
                 1
                    5
                       1
     1 2
              3
                 1
                          7
1
  0
           1
                    5
                       1
     1 2
                          7
1
  0
           1
              3
                 1
                    5
                       1
     1 2
1
  0
           1
              3
                 1
                      1
     1 2
                1 5
                          7
1
  0
           1
              3
1
  0
     1 2
           1
1
  0
     1 2 1
                1 5
1
  0
     1 2
           1
                 1
                      1
1
  0
     1 2
           1
                 1
                      1
                          8
1
  0
     1 2
           1
              3
                 1
                    5 1
                          8
1
   0
     1 2
           1
              3
                 1
                    5 1
                          8
       2
              3
                    5 1
1
   0
     1
           1
                 1
                          8
```

1	0	1	2	1	3	1	5	1	8
1	0	1	2	1	3	1	6	1	9
1	1	1	2	1	3	1	6	1	9
			2						
1	1	1	2	1	3	1	6	1	9
1	1	1	2	1	3	1	6	1	9
1	1	1	2	1	3	1	6	1	9
1	1	1	2	1	3	1	6	1	9
1			2		4	1		1	
	1	1	2	1		1	6	1	9
1	1	1	3	1	4	1	6	1	10
1	1	1	3	1	4	1	6	1	10
1	1	1	3	1	4	1	6	1	10
1	1	1	3	1	4	1	6	1	10
1	1	1	3	1	4	1	6	1	10
1			2	1		1			1.0
1	1	1	3	1	4	1	6	1	11
1	1	1	3	1	4	1	6	1	11
1	1	1	3	1	4	1	6	1	11
1	1	1	3	1	4	1	6	1	11
1	1	1	3	1	4	1	6	1	11
1			2	1				1	1 1
1	1	1	3	1	4	1	6	1	11
1	1	1	3	1	4	1	6	1	11
2	0	2	7	2	11	2	14	2	19
2	0	2	8	2	11	2	14	2	19
2	2	2	8	2	11	2	14	2	19
		2	0	2	11	2	1 1		1.0
2	2	2	8	2	11	2	14	2	19
	2	2	8	2	11	2	14	2	19
2	2	2	8	2	11	2	14	2	19
2	3	2	8	2	11	2	14	2	19
2 2 2	3	2	8	2	11 11 11	2	14	2	19
2	3		8	2	11	2	1 -		19
2	3	2	8	2	11	2	15	2	19
2	3	2	9	2	12	2	15	2	19
2	5	2	9	2	12	2	15	2	20
2	5	2	9	2	12	2	15	2	20
2	5	2	9	2	12	2	15	2	20
2	5	2	9	2	12	2	15	2	20
2	5	2	9	2		2	1.0	2	20
	5	2	9	2	12	2	16	2	20
2	5	2	9	2	12	2	16	2	20
2	5	2	9	2	12	2	16	2	20
2	5	2	9	2	12	2	16	2	20
2	5	2	9	2	12	2	16	2	20
	5				10				
2	2	2	9	2	12	2	16	2	20
	5	2	9		13	2	16	2	20
2	5	2	9	2	13	2	17	2	21
2 2 2 2 2	5	2 2	9	2	13	2	17	2	21 21 21 21
2	6	2	9	2	13	2	17	2	21
2	6	2 2 2	9	2	13	2 2 2	17	2	21
2	0	2	9	2	10	2	17	2	0.1
2	6	2	9	2	13	2	17	2	21
2	6	2	9	2	13	2	17	2	21
2	6		10	2	13	2	17	2	21
2	6	2	10	2	13	2	17	2	21
2	6	2	10	2	14	2	18	2	21
2		2	10	2	14	2		2	21
2 2 2	6	2		2		2	18	2	21
2	6	2	10	2	14	2	18	2	21
2	6	2	10	2	14	2	18	2	22
2	7	2	10	2	14	2	18	2	24

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11 2
                  14 2
                          18 2
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                   14 2
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                   14 2
                          19 2
2
           11 2
                  14 2
                         19
proc univariate normal;
 class group;
 var score;
run;
proc npar1way wilcoxon;
 class group;
 var score;
run;
/***例10-5, 两组等级资料秩和检验********/
data a10 5;
  input group score@@;
cards;
                                 2
1
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2 1
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              1
                2 2
                       2
                          3
2
  1
proc univariate normal;
 class group;
 var score;
run;
proc npar1way wilcoxon;
 class group;
 var score;
run;
/****例10-6, 多组计量资料秩和检验********/
data a10 6;
input group tnf@@;
cards;
1 0.218
1 0.051
  0.186
1
1
  0.198
  0.036
1
2
  0.253
  0.558
  0.352
2
  0.284
2
  0.487
3
  0.695
3
  0.53
3
  0.645
3 0.621
3 0.384
proc univariate normal;
 class group;
 var TNF;
run;
proc npar1way wilcoxon;
 class group;
 var tnf;
run;
/***例10-7, 多组等级资料秩和检验*********/
data a10 7;
 input group grade@@;
cards;
1 1
     2 2
           3 1 3 1 4 1
1 1 2 2 3 1 3 1
                       4 1
1 1 2 2 3
              1 3 2
                         1
                       4
```

```
1
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                                    1
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    1
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                                4
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2
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           1
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2
    1
        3
           1
                3
                    1
                        3
                            3
                                4
                                    2
2
    1
        3
           1
                3
                        4
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                    1
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        3
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                        4
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2
    2
        3
            1
                3
                    1
                        4
                                4
                                     3
        3
           1
                3
                    1
proc univariate normal;
 class group;
 var grade;
run;
proc npar1way wilcoxon;
 class group;
  var grade;
```

run;