**【例10-21】** 设随机变量X的分布律为

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | -2 | -1 | 0 | 1 | 2 |
| p | 0.3 | 0.1 | 0.2 | 0.1 | 0.3 |

求DX，D (X2-1)。

**解：**在Matlab编辑器中建立M文件LX0819.m：

X=[-2 -1 0 1 2];

p=[0.3 0.1 0.2 0.1 0.3];

EX=sum(X.\*p)

Y=X.^2-1

EY=sum(Y.\*p)

DX=sum(X.^2.\*p)-EX.^2

DY=sum(Y.^2.\*p)-EY.^2

运行结果为：

EX =

0

Y =

3 0 -1 0 3

EY =

1.6000

DX =

2.6000

DY =

3.0400