（2）

=

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 3 | 2 | 0 | 4 | 0 | 0 |
| 0 | 0 | 1 | 0 | 3 | 2 | 3 | 0 | 0 |
| 0 | 0 | 0 | 4 | 1 | 0 | 2 | 0 | 0 |
| 0 | 0 | 2 | 3 | 2 | 1 | 4 | 0 | 0 |
| 0 | 0 | 3 | 1 | 0 | 4 | 2 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

|  |  |  |
| --- | --- | --- |
| 1 | 0 | -1 |
| 2 | 0 | -2 |
| 1 | 0 | -1 |

3\*3的卷积核对5\*5的矩阵进行卷积，最后得到7\*7的结果。

F(1,1)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*0+0\*0+-1\*1=-1

F(1,2)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*0+0\*1+-1\*3=--3

F(1,3)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*1+0\*3+-1\*2=--1

F(1,4)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*3+0\*2+-1\*0=-3

F(1,5)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*2+0\*0+-1\*4=--2

F(1,6)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*0+0\*4-1\*0=0

F(1,6)=1\*0+0\*0+-1\*0+2\*0+0\*0+-2\*0+1\*4+0\*0-1\*0=4

...

最后求得结果为