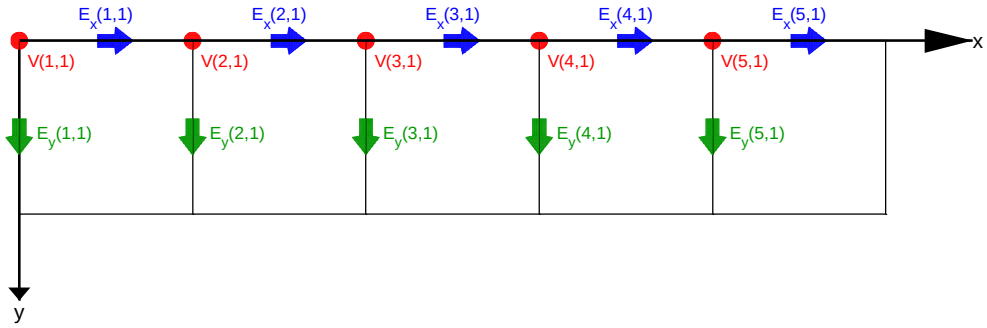
## EXAMPLES OF DERIVATIVE MATRICES GENERATED USING TLDER()

### tlder([5 1],[1 1])




DVX =

```
[ -1    1    0    0    0   ]
[  0   -1    1    0    0   ]
[  0    0   -1    1    0   ]
[  0    0    0   -1    1   ]
[  0    0    0    0   -1   ]
```

DVY =

```
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
```

DEX =

```
[  1    0    0    0    0   ]
[ -1    1    0    0    0   ]
[  0   -1    1    0    0   ]
[  0    0   -1    1    0   ]
[  0    0    0   -1    1   ]
```

DEY =

```
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
```

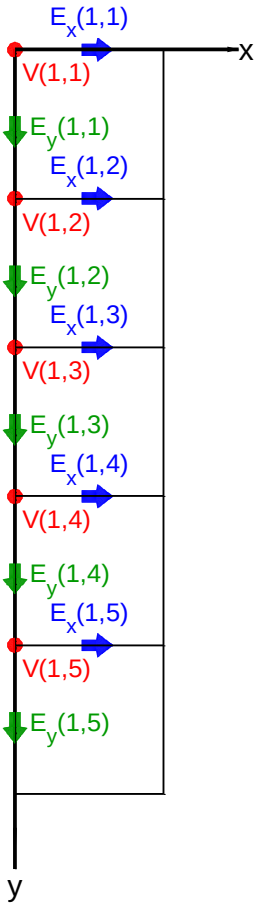
## tlder([1 5],[1 1])

```
DVX =

[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
```

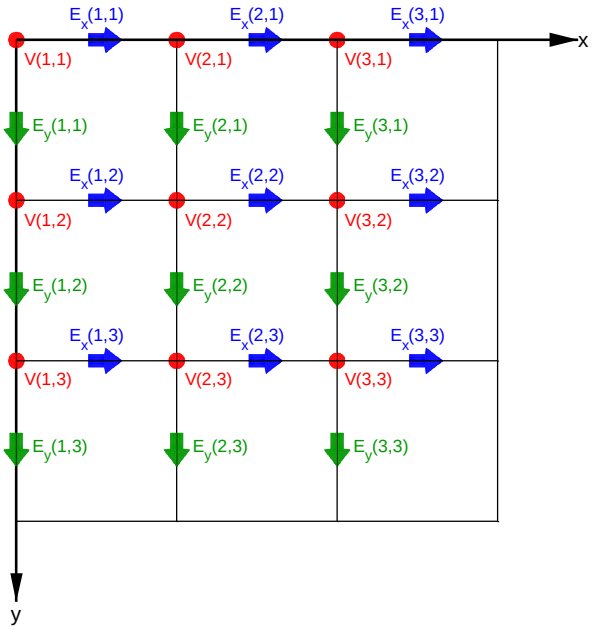
```
DVY =

[ -1    1    0    0    0   ]
[  0   -1    1    0    0   ]
[  0    0   -1    1    0   ]
[  0    0    0   -1    1   ]
[  0    0    0    0   -1   ]
```

```
DEX =

[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
[ 0   0   0   0   0   ]
```

```
DEY =

[  1    0    0    0    0   ]
[ -1    1    0    0    0   ]
[  0   -1    1    0    0   ]
[  0    0   -1    1    0   ]
[  0    0    0   -1    1   ]
```



## tlder([3 3],[0.1 0.25])




DVX =

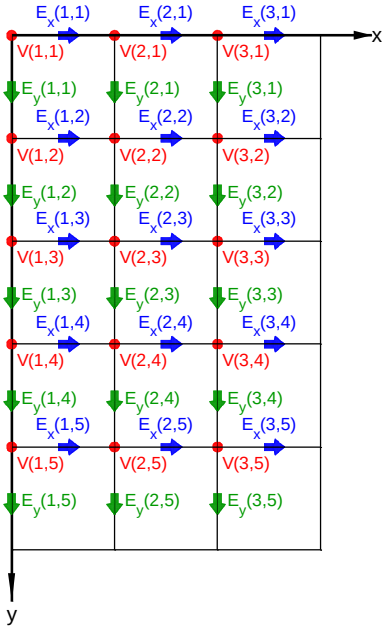
```
[ -10    10     0     0     0     0     0     0     0   ]
[   0   -10    10     0     0     0     0     0     0   ]
[   0     0   -10     0     0     0     0     0     0   ]
[   0     0     0   -10    10     0     0     0     0   ]
[   0     0     0     0   -10    10     0     0     0   ]
[   0     0     0     0     0   -10     0     0     0   ]
[   0     0     0     0     0     0   -10    10     0   ]
[   0     0     0     0     0     0     0   -10    10   ]
[   0     0     0     0     0     0     0     0   -10   ]
```

DVY =

```
[ -4    0    0    4    0    0    0    0    0   ]
[  0   -4    0    0    4    0    0    0    0   ]
[  0    0   -4    0    0    4    0    0    0   ]
[  0    0    0   -4    0    0    4    0    0   ]
[  0    0    0    0   -4    0    0    4    0   ]
[  0    0    0    0    0   -4    0    0    4   ]
[  0    0    0    0    0    0   -4    0    0   ]
[  0    0    0    0    0    0    0   -4    0   ]
[  0    0    0    0    0    0    0    0   -4   ]
```

```
DEX =

[  10    0    0    0    0    0    0    0    0  ]
[ -10   10    0    0    0    0    0    0    0  ]
[   0  -10   10    0    0    0    0    0    0  ]
[   0    0    0   10    0    0    0    0    0  ]
[   0    0    0  -10   10    0    0    0    0  ]
[   0    0    0    0  -10   10    0    0    0  ]
[   0    0    0    0    0    0   10    0    0  ]
[   0    0    0    0    0    0  -10   10    0  ]
[   0    0    0    0    0    0    0  -10   10  ]


DEY =

[  4   0   0   0   0   0   0   0   0  ]
[  0   4   0   0   0   0   0   0   0  ]
[  0   0   4   0   0   0   0   0   0  ]
[ -4   0   0   4   0   0   0   0   0  ]
[  0  -4   0   0   4   0   0   0   0  ]
[  0   0  -4   0   0   4   0   0   0  ]
[  0   0   0  -4   0   0   4   0   0  ]
[  0   0   0   0  -4   0   0   4   0  ]
[  0   0   0   0   0  -4   0   0   4  ]
```

## tlder([3 5],[0.1 0.25])




DVX =

```
[ -10   10    0    0    0    0    0    0    0    0    0    0    0    0    0 ]
[   0  -10   10    0    0    0    0    0    0    0    0    0    0    0    0 ]
[   0    0  -10    0    0    0    0    0    0    0    0    0    0    0    0 ]
[   0    0    0  -10   10    0    0    0    0    0    0    0    0    0    0 ]
[   0    0    0    0  -10   10    0    0    0    0    0    0    0    0    0 ]
[   0    0    0    0    0  -10    0    0    0    0    0    0    0    0    0 ]
[   0    0    0    0    0    0  -10   10    0    0    0    0    0    0    0 ]
[   0    0    0    0    0    0    0  -10   10    0    0    0    0    0    0 ]
[   0    0    0    0    0    0    0    0  -10    0    0    0    0    0    0 ]
[   0    0    0    0    0    0    0    0    0  -10   10    0    0    0    0 ]
[   0    0    0    0    0    0    0    0    0    0  -10   10    0    0    0 ]
[   0    0    0    0    0    0    0    0    0    0    0  -10    0    0    0 ]
[   0    0    0    0    0    0    0    0    0    0    0    0  -10   10    0 ]
[   0    0    0    0    0    0    0    0    0    0    0    0    0  -10   10 ]
[   0    0    0    0    0    0    0    0    0    0    0    0    0    0  -10 ]
```

DVY =

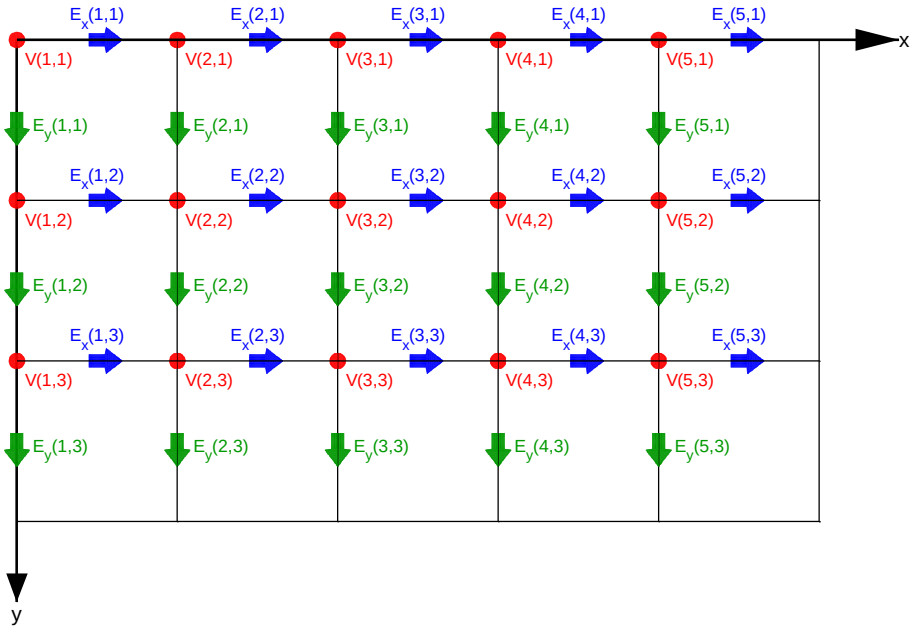
```
[ -4   0   0   4   0   0   0   0   0   0   0   0   0   0   0 ]
[  0  -4   0   0   4   0   0   0   0   0   0   0   0   0   0 ]
[  0   0  -4   0   0   4   0   0   0   0   0   0   0   0   0 ]
[  0   0   0  -4   0   0   4   0   0   0   0   0   0   0   0 ]
[  0   0   0   0  -4   0   0   4   0   0   0   0   0   0   0 ]
[  0   0   0   0   0  -4   0   0   4   0   0   0   0   0   0 ]
[  0   0   0   0   0   0  -4   0   0   4   0   0   0   0   0 ]
[  0   0   0   0   0   0   0  -4   0   0   4   0   0   0   0 ]
[  0   0   0   0   0   0   0   0  -4   0   0   4   0   0   0 ]
[  0   0   0   0   0   0   0   0   0  -4   0   0   4   0   0 ]
[  0   0   0   0   0   0   0   0   0   0  -4   0   0   4   0 ]
[  0   0   0   0   0   0   0   0   0   0   0  -4   0   0   4 ]
[  0   0   0   0   0   0   0   0   0   0   0   0  -4   0   0 ]
[  0   0   0   0   0   0   0   0   0   0   0   0   0  -4   0 ]
```

```
[  0   0   0   0   0   0   0   0   0   0   0   0   0   0  -4  ]
```

```
DEX =

[  10    0    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[ -10   10    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[   0  -10   10    0    0    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0   10    0    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0  -10   10    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0    0  -10   10    0    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0   10    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0  -10   10    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0    0  -10   10    0    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0   10    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0  -10   10    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0  -10   10    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0   10    0    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0  -10   10    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0    0  -10   10  ]
```

```
DEY =

[  4   0   0   0   0   0   0   0   0   0   0   0   0   0   0  ]
[  0   4   0   0   0   0   0   0   0   0   0   0   0   0   0  ]
[  0   0   4   0   0   0   0   0   0   0   0   0   0   0   0  ]
[ -4   0   0   4   0   0   0   0   0   0   0   0   0   0   0  ]
[  0  -4   0   0   4   0   0   0   0   0   0   0   0   0   0  ]
[  0   0  -4   0   0   4   0   0   0   0   0   0   0   0   0  ]
[  0   0   0  -4   0   0   4   0   0   0   0   0   0   0   0  ]
[  0   0   0   0  -4   0   0   4   0   0   0   0   0   0   0  ]
[  0   0   0   0   0  -4   0   0   4   0   0   0   0   0   0  ]
[  0   0   0   0   0   0  -4   0   0   4   0   0   0   0   0  ]
[  0   0   0   0   0   0   0  -4   0   0   4   0   0   0   0  ]
[  0   0   0   0   0   0   0   0  -4   0   0   4   0   0   0  ]
[  0   0   0   0   0   0   0   0   0  -4   0   0   4   0   0  ]
[  0   0   0   0   0   0   0   0   0   0  -4   0   0   4   0  ]
[  0   0   0   0   0   0   0   0   0   0   0  -4   0   0   4  ]
```

## `tlder([5 3],[0.1 0.25])`




```
DVX =

[ -10   10    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[   0  -10   10    0    0    0    0    0    0    0    0    0    0    0    0  ]
[   0    0  -10   10    0    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0  -10   10    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0    0  -10    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0  -10   10    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0  -10   10    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0    0  -10   10    0    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0  -10   10    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0  -10    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0  -10   10    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0    0  -10   10    0    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0  -10   10    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0    0  -10   10  ]
[   0    0    0    0    0    0    0    0    0    0    0    0    0    0  -10  ]
```

DVY =

```
[ -4    0    0    0    0    4    0    0    0    0    0    0    0    0    0  ]
[  0   -4    0    0    0    0    4    0    0    0    0    0    0    0    0  ]
[  0    0   -4    0    0    0    0    4    0    0    0    0    0    0    0  ]
[  0    0    0   -4    0    0    0    0    4    0    0    0    0    0    0  ]
[  0    0    0    0   -4    0    0    0    0    4    0    0    0    0    0  ]
[  0    0    0    0    0   -4    0    0    0    0    4    0    0    0    0  ]
[  0    0    0    0    0    0   -4    0    0    0    0    4    0    0    0  ]
[  0    0    0    0    0    0    0   -4    0    0    0    0    4    0    0  ]
[  0    0    0    0    0    0    0    0   -4    0    0    0    0    4    0  ]
[  0    0    0    0    0    0    0    0    0   -4    0    0    0    0    4  ]
[  0    0    0    0    0    0    0    0    0    0   -4    0    0    0    0  ]
[  0    0    0    0    0    0    0    0    0    0    0   -4    0    0    0  ]
[  0    0    0    0    0    0    0    0    0    0    0    0   -4    0    0  ]
[  0    0    0    0    0    0    0    0    0    0    0    0    0   -4    0  ]
[  0    0    0    0    0    0    0    0    0    0    0    0    0    0   -4  ]
```

DEX =

```
[  10    0    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[ -10   10    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[   0  -10   10    0    0    0    0    0    0    0    0    0    0    0    0  ]
[   0    0  -10   10    0    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0  -10   10    0    0    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0   10    0    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0  -10   10    0    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0  -10   10    0    0    0    0    0    0    0  ]
[   0    0    0    0    0    0    0  -10   10    0    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0  -10   10    0    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0   10    0    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0  -10   10    0    0    0  ]
[   0    0    0    0    0    0    0    0    0    0    0  -10   10    0    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0  -10   10    0  ]
[   0    0    0    0    0    0    0    0    0    0    0    0    0  -10   10  ]
```

DEY =

```
[  4    0    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[  0    4    0    0    0    0    0    0    0    0    0    0    0    0    0  ]
[  0    0    4    0    0    0    0    0    0    0    0    0    0    0    0  ]
[  0    0    0    4    0    0    0    0    0    0    0    0    0    0    0  ]
[  0    0    0    0    4    0    0    0    0    0    0    0    0    0    0  ]
[ -4    0    0    0    0    4    0    0    0    0    0    0    0    0    0  ]
[  0   -4    0    0    0    0    4    0    0    0    0    0    0    0    0  ]
[  0    0   -4    0    0    0    0    4    0    0    0    0    0    0    0  ]
[  0    0    0   -4    0    0    0    0    4    0    0    0    0    0    0  ]
[  0    0    0    0   -4    0    0    0    0    4    0    0    0    0    0  ]
[  0    0    0    0    0   -4    0    0    0    0    4    0    0    0    0  ]
[  0    0    0    0    0    0   -4    0    0    0    0    4    0    0    0  ]
[  0    0    0    0    0    0    0   -4    0    0    0    0    4    0    0  ]
[  0    0    0    0    0    0    0    0   -4    0    0    0    0    4    0  ]
[  0    0    0    0    0    0    0    0    0   -4    0    0    0    0    4  ]
```