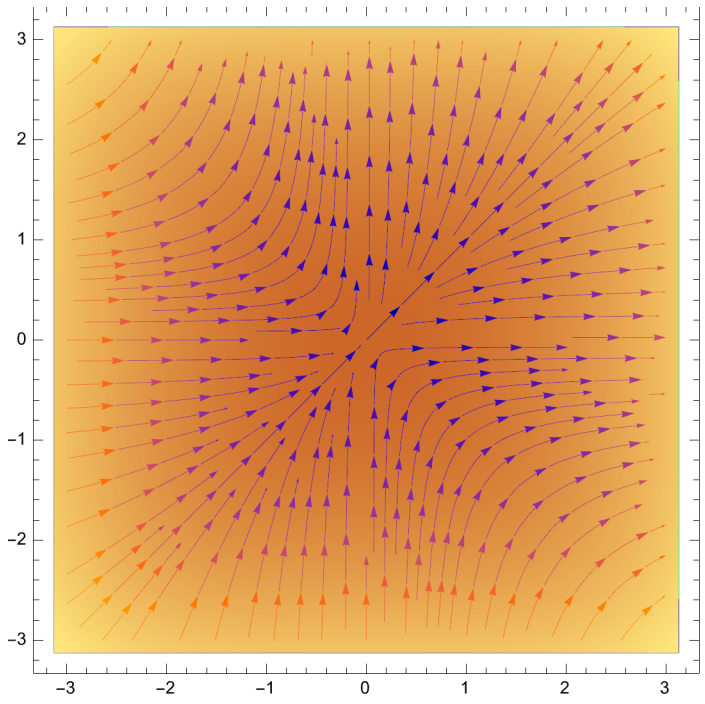
雅可比矩阵的几何意义

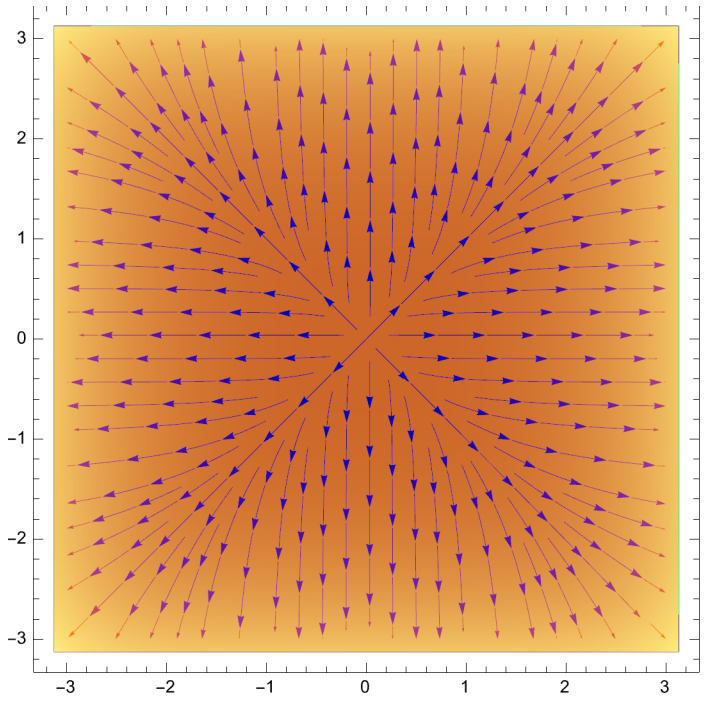
In[ ]:=
```
StreamDensityPlot[{x^2, y^2}, {x, -3, 3}, {y, -3, 3}]
```
流密度图

Out[ ]=



In[ ]:=
```
J = {{2 x, 0}, {0, 2 y}};
StreamDensityPlot[J.{x^2, y^2}, {x, -3, 3}, {y, -3, 3}]
```
流密度图

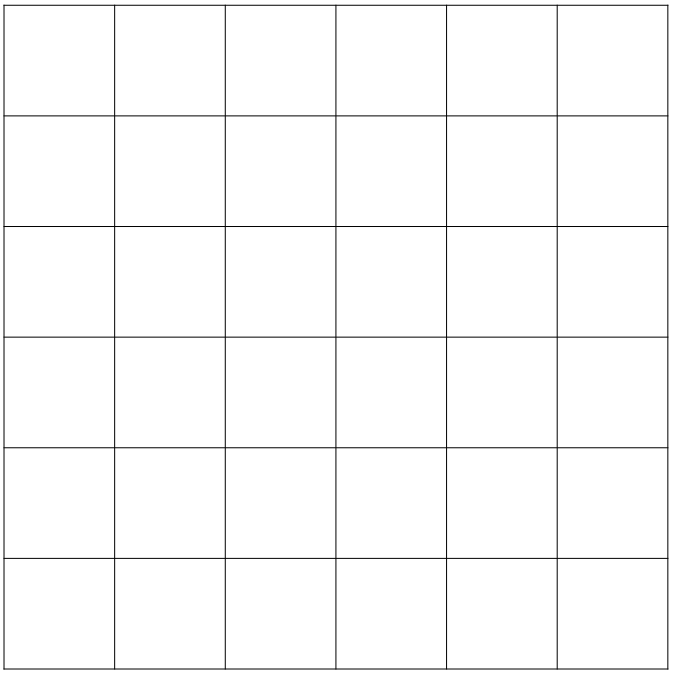
Out[ ]=



雅可比矩阵

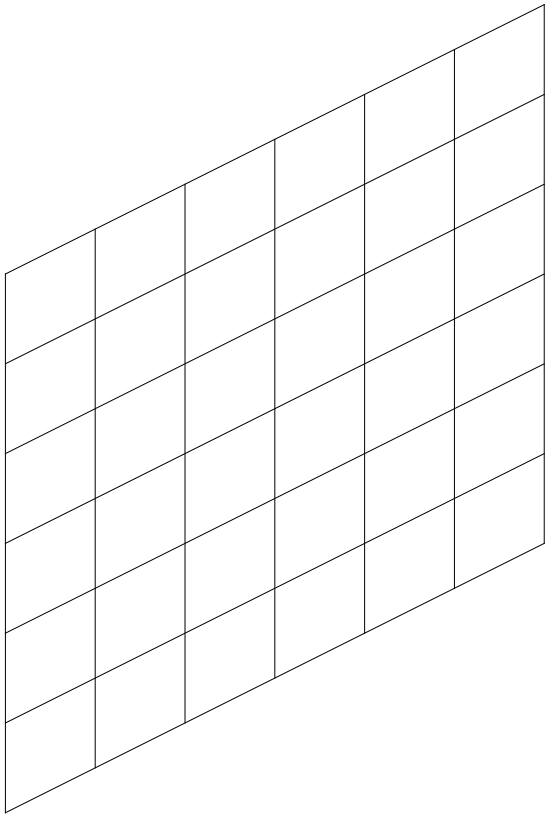
In[ ]:=
```
Graphics[{Line[Table[{{-3 + d, -3}, {-3 + d, 3}}, {d, 0, 6}]],
  Line[Table[{{-3, -3 + d}, {3, -3 + d}}, {d, 0, 6}]]}]
```
图形 线段 表格 线段 表格

Out[ ]=



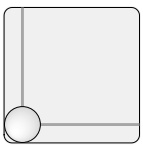
In[ ]:=
```
J = {{2, 0}, {1, 2}};
Graphics[{Line[Table[{J.{-3 + d, -3}, J.{-3 + d, 3}}, {d, 0, 6}]],
  Line[Table[{J.{-3, -3 + d}, J.{3, -3 + d}}, {d, 0, 6}]]}]
```
图形 线段 表格 线段 表格

Out[ ]=



In[ ]:=
```
Slider2D[Dynamic[{x, y}], {-2, 2}]
sp = StreamDensityPlot[{x^2, y^2}, {x, -3, 3}, {y, -3, 3}];
Dynamic@Show[sp, J = {{2 x, 0}, {0, 2 y}};
  Graphics[{Line[Table[{J.{-3 + d, -3}, J.{-3 + d, 3}}, {d, 0, 6}]],
    Line[Table[{J.{-3, -3 + d}, J.{3, -3 + d}}, {d, 0, 6}]]}]]
```
二维滑动条 动态 流密度图 动态 显示 图形 线段 表格 线段 表格

Out[ ]=



Out[ ]=

```
Slider2D[Dynamic[{x, y}], {-2, 2}]
```
二维滑动条 动态

```
sp = StreamDensityPlot[{x^2, y^2}, {x, -3, 3}, {y, -3, 3}];
```
流密度图

```
Dynamic@Show[sp, J = {{2 x, 0}, {0, 2 y}};
```
动态 显示

```
  Graphics[{Line[Table[{J.{-3 + d, -3}, J.{-3 + d, 3}}, {d, 0, 6}]],
```
图形 线段 表格

```
    Line[Table[{J.{-3, -3 + d}, J.{3, -3 + d}}, {d, 0, 6}]]}]]
```
线段 表格