

Use the MATLAB code provided to plot the given vector field. How would you describe the behavior of these vector fields?

- $x \hat{\mathbf{x}} + 2y \hat{\mathbf{y}}$
- $-x \hat{\mathbf{x}} + \hat{\mathbf{y}}$
- $y \hat{\mathbf{x}} - 2 \hat{\mathbf{y}}$

```
[x,y]=meshgrid(-5:0.5:5,-5:0.5:5);
```

```
U= $\hat{\mathbf{x}}$ -component;
```

```
V= $\hat{\mathbf{y}}$ -component;
```

```
quiver(x,y,U,V)
```