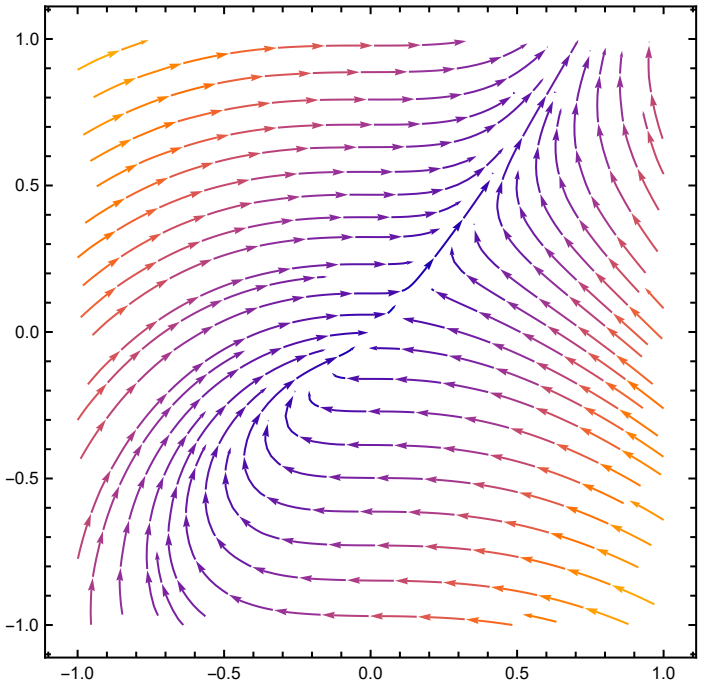
In[7]:=
```
f[x_, y_] := y - x;
g[x_, y_] := x^2; Solve[f[x, y] == 0 && g[x, y] == 0, {x, y}]
StreamPlot[{f[x, y], g[x, y]}, {x, -1, 1}, {y, -1, 1}]
```

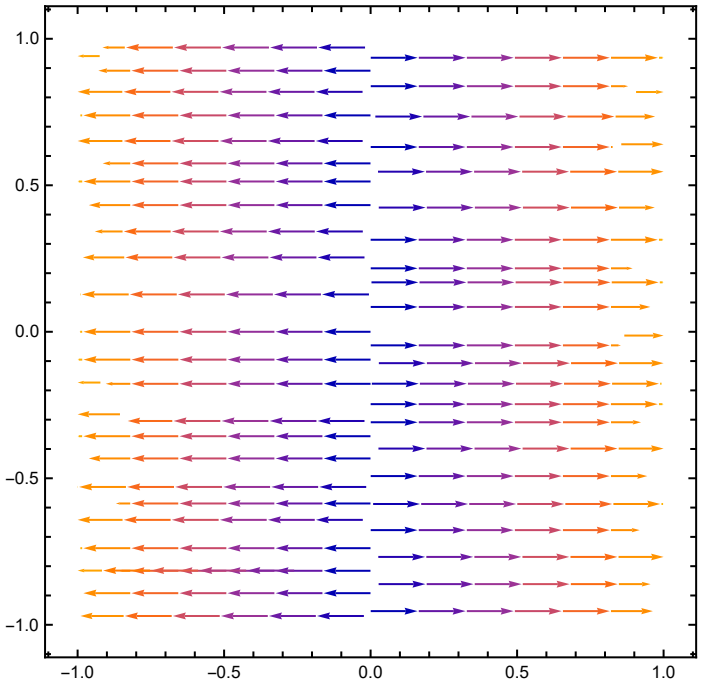
Out[8]=
```
{{x → 0, y → 0}}
```

Out[9]=



In[16]:=
```
dr[r_] := a * r;
dθ[θ_] := 0;
StreamPlot[{dr[r], 0} /. {a → 1}, {r, -1, 1}, {θ, -1, 1}]
```

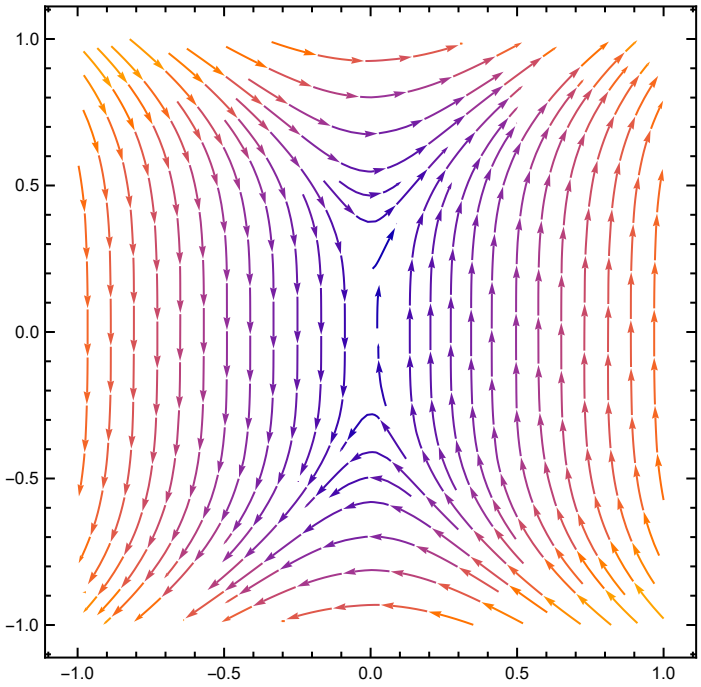
Out[18]=



In[19]:=
```
f[x_, y_] := y^3;
g[x_, y_] := x; Solve[f[x, y] == 0 && g[x, y] == 0, {x, y}]
StreamPlot[{f[x, y], g[x, y]}, {x, -1, 1}, {y, -1, 1}]
```

Out[20]=
```
{{x → 0, y → 0}, {x → 0, y → 0}, {x → 0, y → 0}}
```

Out[21]=



In[45]:=
```
n = .;
f[x_, y_] := (x^2 + y^2) ^ (Abs[n] / 2) * Cos[n * ArcTan[y / x]];
g[x_, y_] := (x^2 + y^2) ^ (Abs[n] / 2) * Sin[n * ArcTan[y / x]];
ϕ[x_, y_] := ArcTan[g[x, y] / f[x, y]];
index =
 (Integrate[D[ϕ[1, y], y], {y, -1, 1}] + Integrate[D[ϕ[x, 1], x], {x, 1, -1}] + Integrate[
     D[ϕ[-1, y], y], {y, 1, -1}] + Integrate[D[ϕ[x, -1], x], {x, -1, 1}]) / (2 * Pi)
```

Out[49]=
```
n
```

In[44]:=
```
StreamPlot[{f[x, y], g[x, y]} /. n → -1, {x, -3, 3}, {y, -3, 3}]
```

Out[44]=