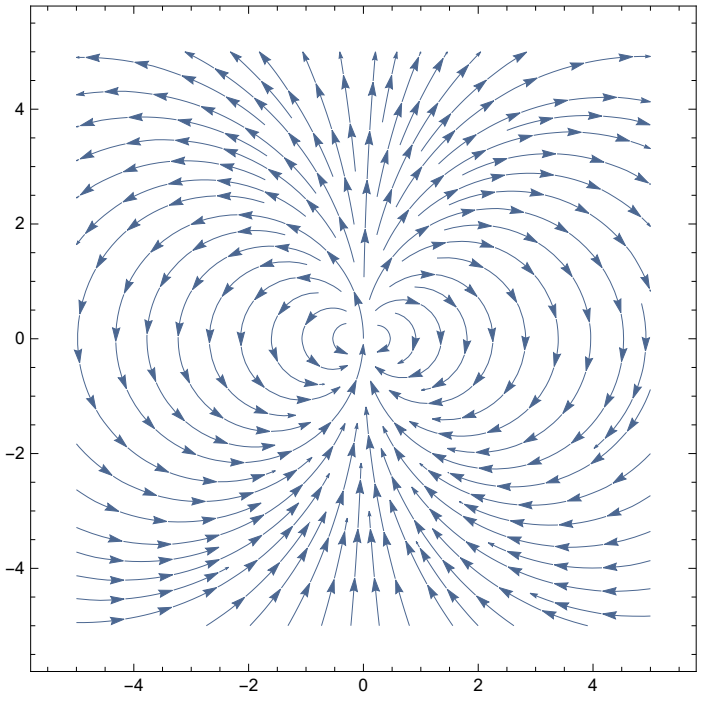
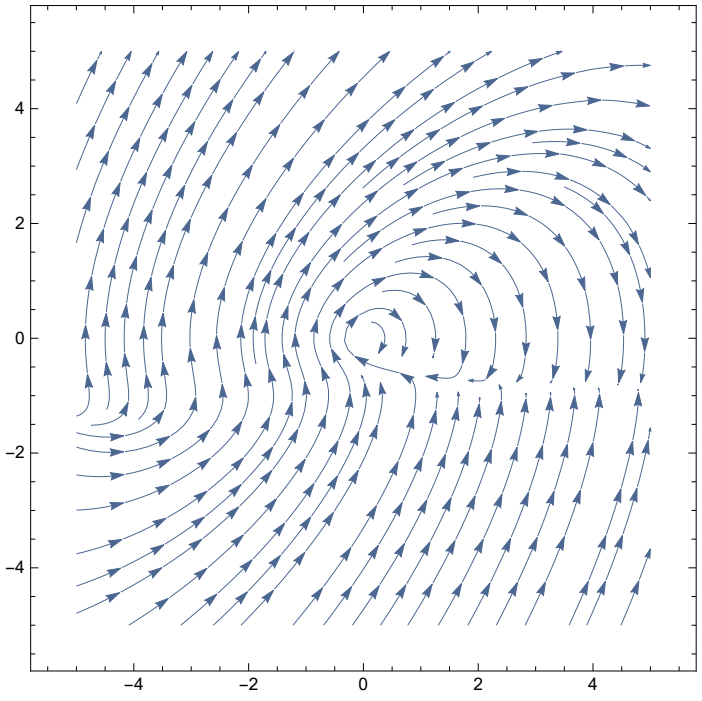
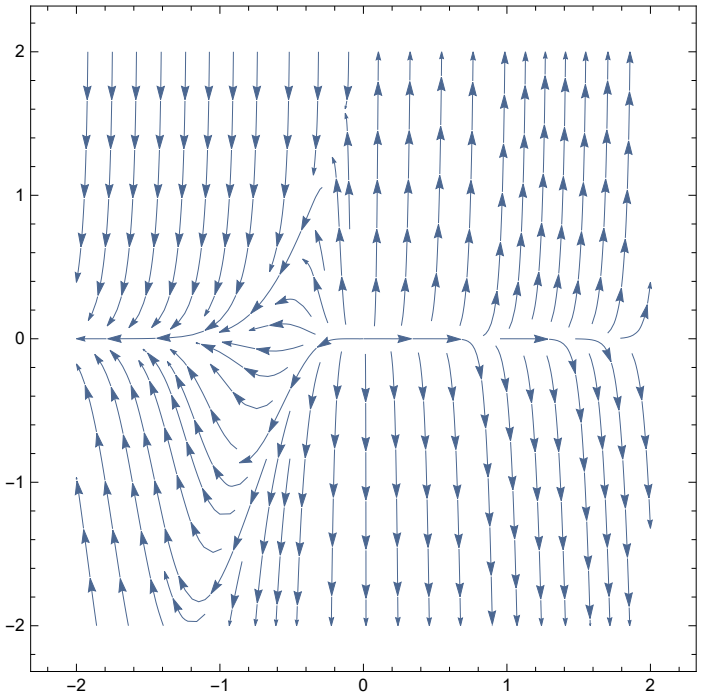
```
f1[x_, y_] := 2 * x * y
g1[x_, y_] := y^2 - x^2
StreamPlot[{f1[x, y], g1[x, y]}, {x, -5, 5}, {y, -5, 5}]
```



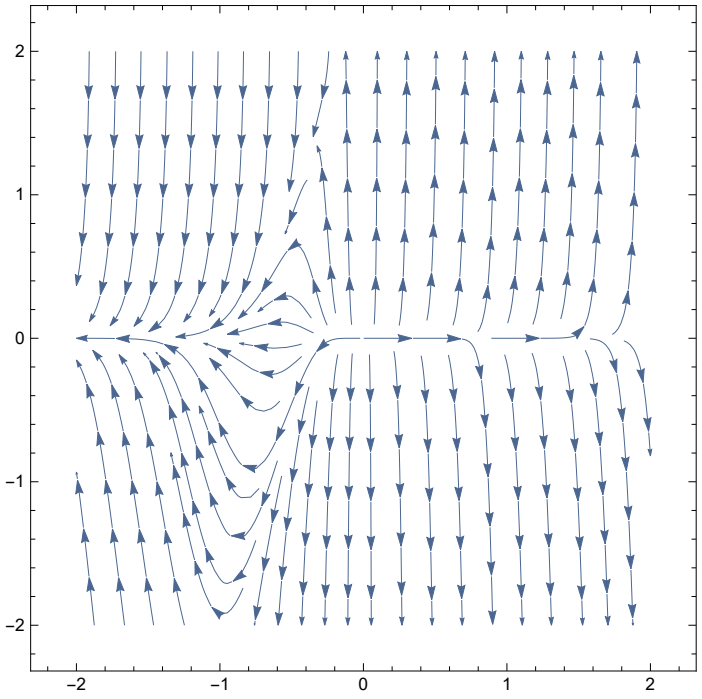

```
f2[x_, y_] := y + y^2
g2[x_, y_] := -x + 1 / 5 * y - x * y + 6 / 5 * y^2
StreamPlot[{f2[x, y], g2[x, y]}, {x, -5, 5}, {y, -5, 5}]
```



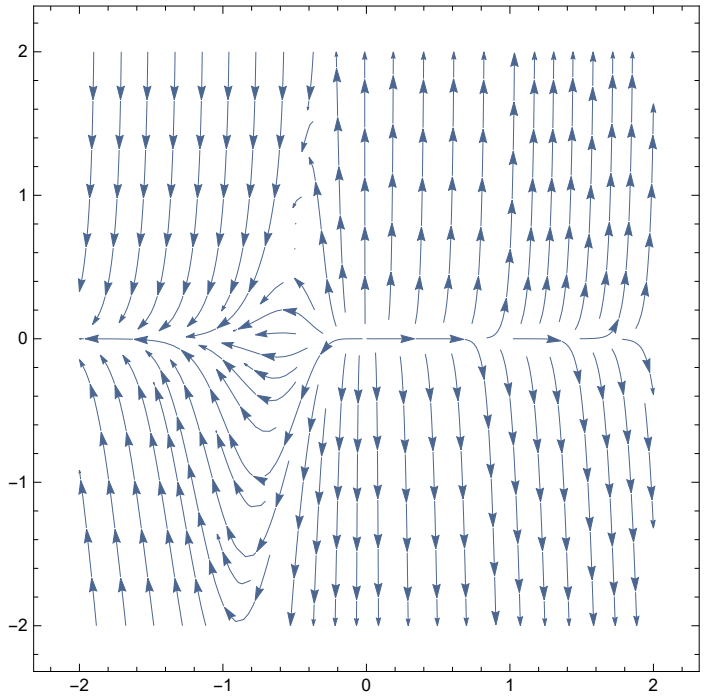
```
F1[x_, y_] := 0.3 x - 0.1 x * y
G1[x_, y_] := 3 y * (1 - y / 2) + 5 x * y
StreamPlot[{F1[x, y], G1[x, y]}, {x, -2, 2}, {y, -2, 2}]
```




```
F2[x_, y_] := 0.3 x - 0.1 x * y
G2[x_, y_] := 3 y * (1 - y / 3) + 5 x * y
StreamPlot[{F2[x, y], G2[x, y]}, {x, -2, 2}, {y, -2, 2}]
```



```
F3[x_, y_] := 0.3 x - 0.1 x * y
G3[x_, y_] := 3 y * (1 - y / 4) + 5 x * y
StreamPlot[{F3[x, y], G3[x, y]}, {x, -2, 2}, {y, -2, 2}]
```



```
n = 20
F[x_, y_] := -x * y
Y[x_, y_] := 2 x * y - (n - 1) * y
sol = NDSolve[{x'[t] == F[x[t], y[t]],
   y'[t] == Y[x[t], y[t]], x[0] == n - 1, y[0] == 1}, {x, y}, {t, 1000}]
x[1000] /. sol
```

```
20
```

```
{{x → InterpolatingFunction[ 

],
  y → InterpolatingFunction[ 

]}}
```

```
{3.54176}
```

```
n = 20
NSolve[2 * n - 1 - 2 x + (n - 1) * Log[x / (n - 1)] == 0, x]
```

```
20
```

```
NSolve::ifun : Inverse functions are being used by NSolve,
    so some solutions may not be found; use Reduce for complete solution information. >>
```

```
{{x → 3.54176}, {x → 19.9758}}
```