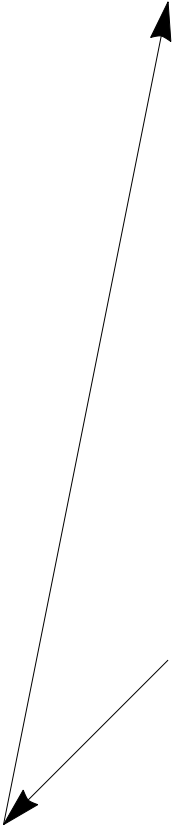
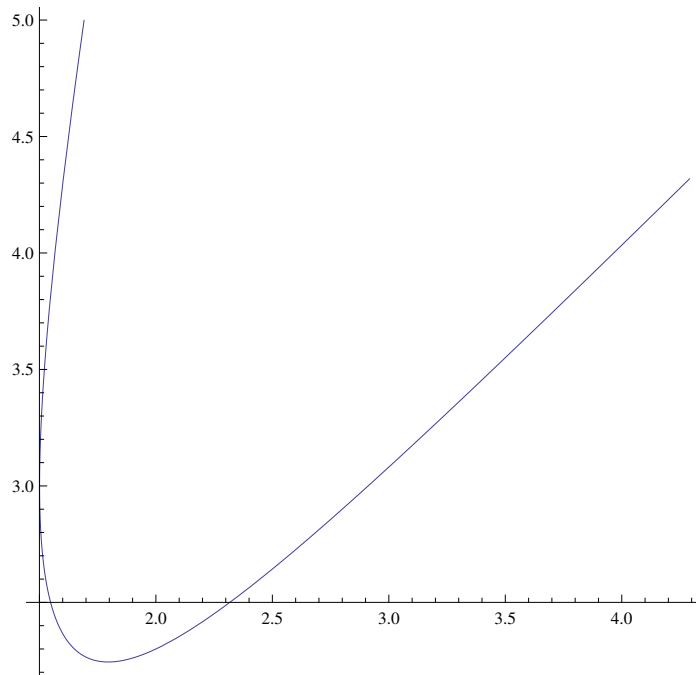


```
ev1 = Graphics[{Arrowheads[Large], Arrow[{{0, 0}, {1, 5}}]};  
ev2 = Graphics[{Arrowheads[Large], Arrow[{{1, 1}, {0, 0}}]};  
Show[ev1, ev2]
```



```
soln[c_, d_] := NDSolve[{dx'[dt] == -2 dx[dt] + dy[dt],  
  dy'[dt] == -5 dx[dt] + 4 dy[dt] , dx[0] == c, dy[0] == d}, {dx, dy}, {dt, -2, 2}]  
soln1 = soln[2, 2.3]  
{dx → InterpolatingFunction[{{-2., 2.}}, <>],  
  dy → InterpolatingFunction[{{-2., 2.}}, <>]}
```

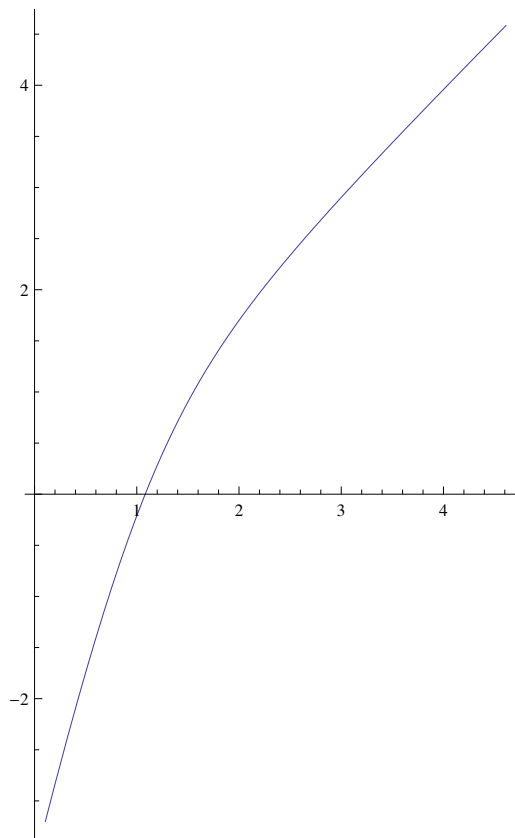
```
trace1 = ParametricPlot[{dx[t], dy[t]} /. soln1, {t, -.8, .8}]
```



```
soln2 = soln[2, 1.7]
```

```
{dx → InterpolatingFunction[{{-2., 2.}}, <>],  
 dy → InterpolatingFunction[{{-2., 2.}}, <>]}
```

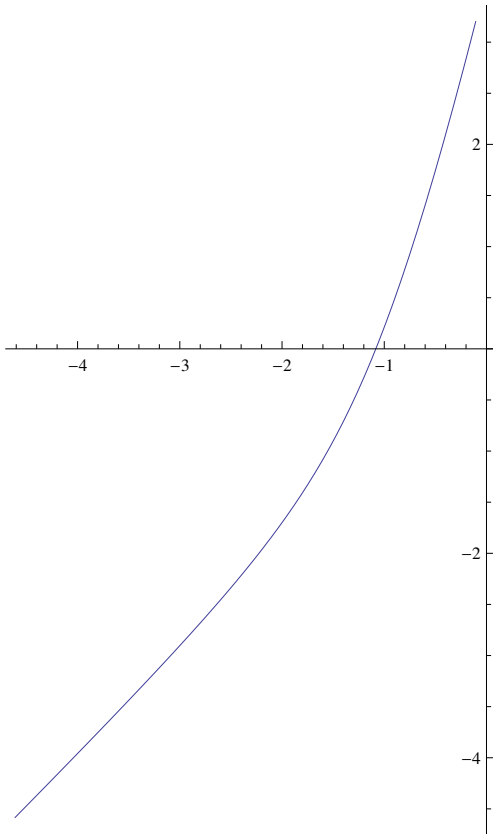
```
trace2 = ParametricPlot[{dx[t], dy[t]} /. soln2, {t, -.8, .8}]
```



```
soln3 = soln[-2, -1.7]
```

```
{dx → InterpolatingFunction[{{-2., 2.}}, <>],  
 dy → InterpolatingFunction[{{-2., 2.}}, <>]}
```

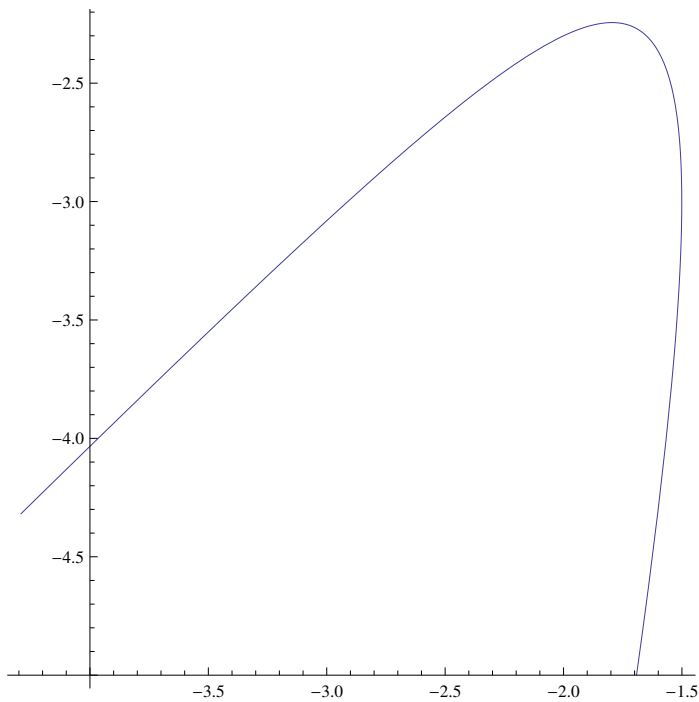
```
trace3 = ParametricPlot[{dx[t], dy[t]} /. soln3, {t, -.8, .8}]
```



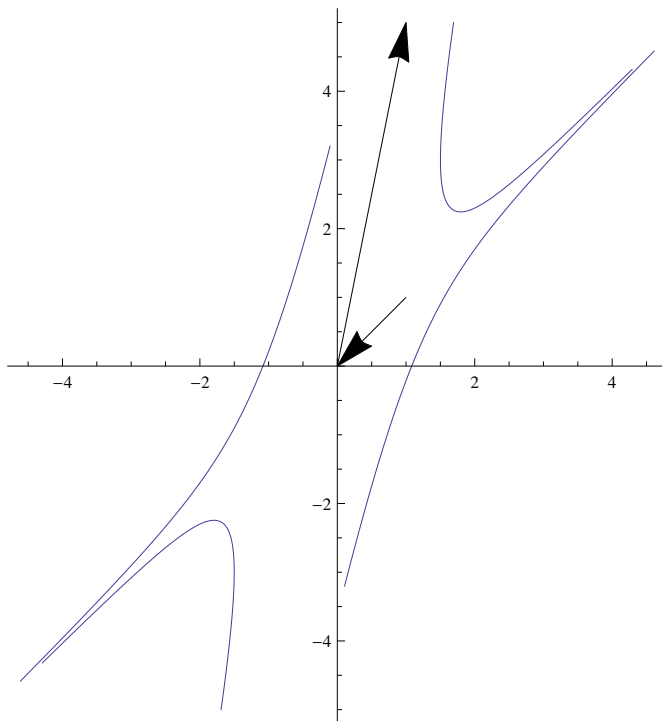
```
soln4 = soln[-2, -2.3]
```

```
{dx → InterpolatingFunction[{{-2., 2.}}, <>],  
 dy → InterpolatingFunction[{{-2., 2.}}, <>]}
```

```
trace4 = ParametricPlot[{dx[t], dy[t]} /. soln4, {t, -.8, .8}]
```



```
Show[trace1, ev1, ev2, trace2, trace3, trace4, PlotRange -> All, AxesOrigin -> {0, 0}]
```



```
lsoln[c_, d_] := NDSolve[{dx'[dt] == dx[dt] + 2 dy[dt],  
  dy'[dt] == -5 dx[dt] - dy[dt], dx[0] == c, dy[0] == d}, {dx, dy}, {dt, -2, 2}]
```

```
lsoln1 = lsoln[1, 0]
{{dx → InterpolatingFunction[{{-2., 2.}}, <>],
 dy → InterpolatingFunction[{{-2., 2.}}, <>]}}

ltrace1 = ParametricPlot[{dx[t], dy[t]} /. lsoln1, {t, 0, 2}];

lsoln2 = lsoln[1/2, 0]
{{dx → InterpolatingFunction[{{-2., 2.}}, <>],
 dy → InterpolatingFunction[{{-2., 2.}}, <>]}}

ltrace2 = ParametricPlot[{dx[t], dy[t]} /. lsoln2, {t, 0, 1.5}];

direction = Graphics[Arrowheads[Large], Arrow[{{1, 0}, {5/4, -5/4}}]];

Show[ltrace1, ltrace2, direction, PlotRange → All]
```

