

```

In[591]:= sigma0 = -1;
StreamPlot[
  { (sigma + 3) * x + 4 y, -9/4 x + (sigma - 3) y } /. {sigma -> sigma0},
  {x, -10, 10},
  {y, -10, 10},
  StreamStyle -> {Red},
  PlotLabel -> StringJoin["σ = ", ToString[N[sigma0]]],
  FrameLabel -> {Style["x", Black, Medium], Style["y", Black, Medium]},
  Epilog -> {{PointSize[Large], Point[{0, 0}]},
    Text[Style["Stable fixed point", Medium, Bold], {0, -1}]},
  LabelStyle -> Directive[FontSize -> 15]
]

sigma0 = 0;
StreamPlot[
  { (sigma + 3) * x + 4 y, -9/4 x + (sigma - 3) y } /. {sigma -> sigma0},
  {x, -10, 10},
  {y, -10, 10},
  StreamStyle -> {Red},
  PlotLabel -> StringJoin["σ = ", ToString[N[sigma0]]],
  FrameLabel -> {Style["x", Black, Medium], Style["y", Black, Medium]},
  Epilog -> {{PointSize[Large], Point[{0, 0}]},
    Text[Style["Unstable fixed point", Medium, Bold], {0, -1}]},
  LabelStyle -> Directive[FontSize -> 15]
]

sigma0 = 1;
StreamPlot[
  { (sigma + 3) * x + 4 y, -9/4 x + (sigma - 3) y } /. {sigma -> sigma0},
  {x, -10, 10},
  {y, -10, 10},
  StreamStyle -> {Red},
  PlotLabel -> StringJoin["σ = ", ToString[N[sigma0]]],
  FrameLabel -> {Style["x", Black, Medium], Style["y", Black, Medium]},
  Epilog -> {{PointSize[Large], Point[{0, 0}]},
    Text[Style["Unstable fixed point", Medium, Bold], {0, -1}]},
  LabelStyle -> Directive[FontSize -> 15]
]

```



