

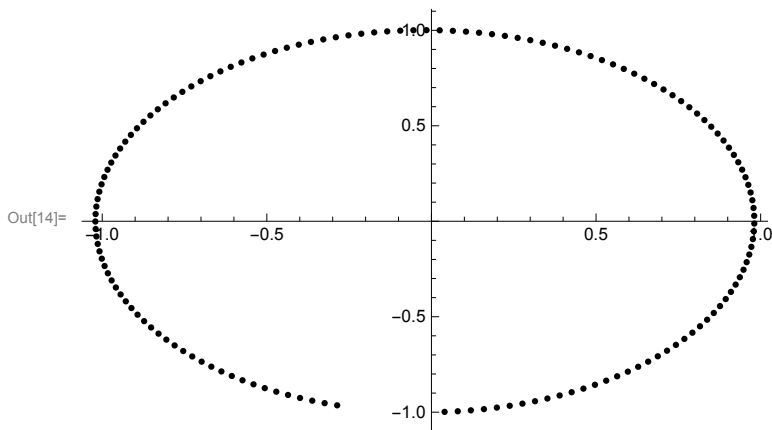
In[1]:= $s0 = \{0, -1\}$

Out[1]= $\{0, -1\}$

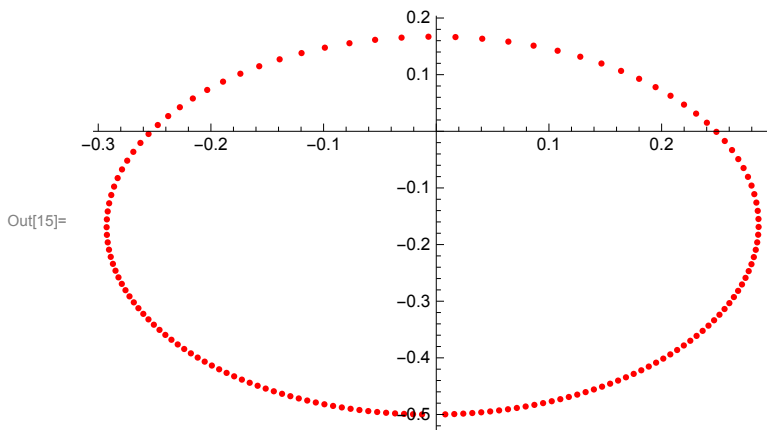
In[2]:= $v0 = \{1, 0\}$

Out[2]= $\{1, 0\}$

In[14]:= $pl1 = \text{ListPlot}[\text{Module}[\{\tau = 0.04, mg = 1., si = s0, vi = v0, sip, vip\},$
 $\text{Table}[vip = vi + mg * (-si) * \tau / \text{Norm}[si]^3;$
 $sip = si + vip * \tau; vi = vip; si = sip, \{i, 150\}]], \text{PlotStyle} \rightarrow \{\text{Black}\}]$



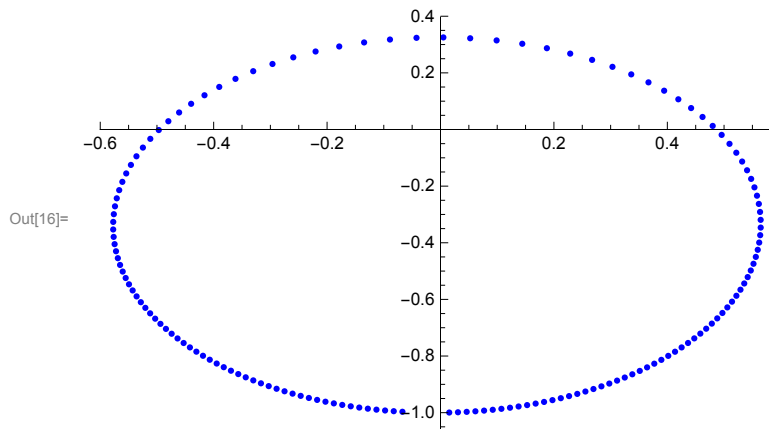
In[15]:= $pl2 = \text{ListPlot}[\text{Module}[\{\tau = 0.008, mg = 1., si = s0 * .5, vi = v0, sip, vip\},$
 $\text{Table}[vip = vi + mg * (-si) * \tau / \text{Norm}[si]^3;$
 $sip = si + vip * \tau; vi = vip; si = sip, \{i, 150\}]], \text{PlotStyle} \rightarrow \{\text{Red}\}]$



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In[16]:= p13 = ListPlot[Module[{tau = 0.022, mg = 1., si = s0, vi = v0 * .7, sip, vip},
  Table[vip = vi + mg * (-si) * tau / Norm[si]^3;
    sip = si + vip * tau; vi = vip; si = sip, {i, 150}]], PlotStyle -> {Blue}]

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Show[p11, p12, p13, AspectRatio -> 1]

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(*schwarz r={0,-1}, v= {1,0}
  rot r={0,-0.5}, v= {1,0}
  blau r={0,-1}, v= {0.7,0}
*)

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