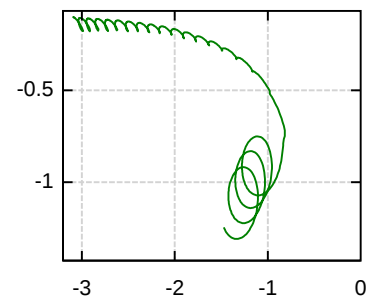
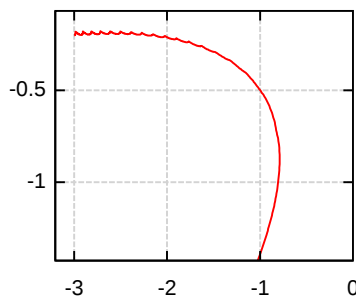
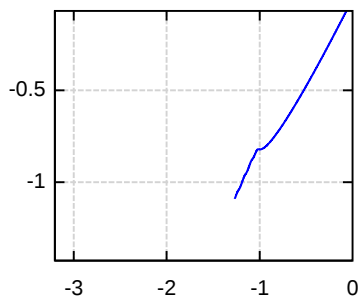
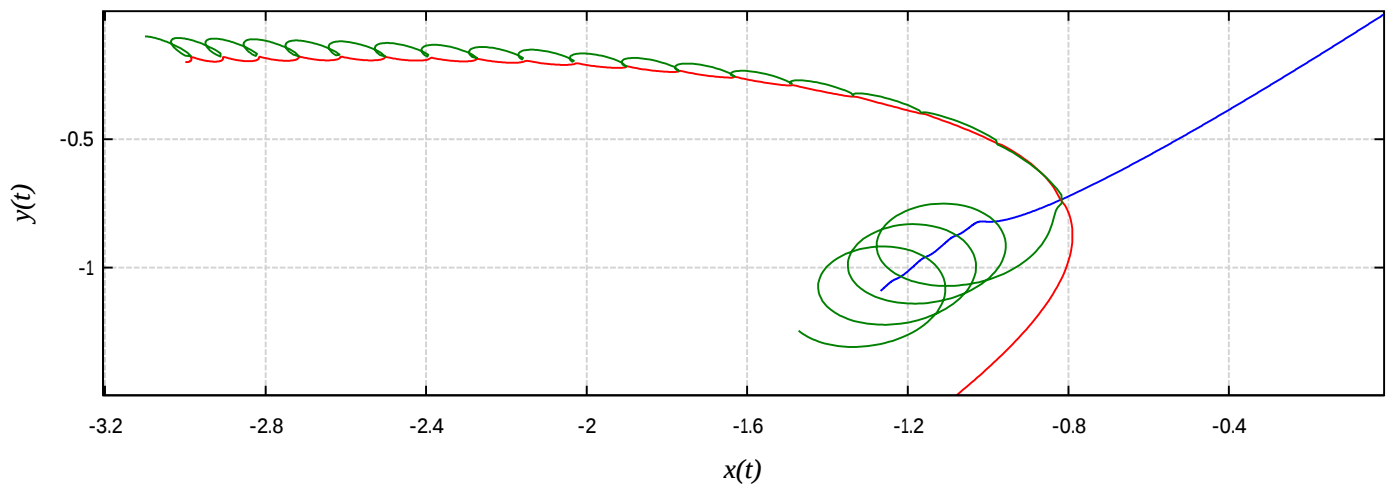


appVersion(4) = "1.0.8348.30405"

$$\begin{aligned}
 & \begin{aligned}
 & \Delta x_{21} := x_2(t) - x_1(t) \quad \Delta x_{12} := -\Delta x_{21} \quad \Delta y_{21} := y_2(t) - y_1(t) \quad \Delta y_{12} := -\Delta y_{21} \\
 & \Delta x_{31} := x_3(t) - x_1(t) \quad \Delta x_{13} := -\Delta x_{31} \quad \Delta y_{31} := y_3(t) - y_1(t) \quad \Delta y_{13} := -\Delta y_{31} \\
 & \Delta x_{32} := x_3(t) - x_2(t) \quad \Delta x_{23} := -\Delta x_{32} \quad \Delta y_{32} := y_3(t) - y_2(t) \quad \Delta y_{23} := -\Delta y_{32} \\
 & r_{21} := \sqrt{\Delta x_{21}^2 + \Delta y_{21}^2} \quad r_{31} := \sqrt{\Delta x_{31}^2 + \Delta y_{31}^2} \quad r_{32} := \sqrt{\Delta x_{32}^2 + \Delta y_{32}^2} \\
 & r_{12} := r_{21} \quad r_{13} := r_{31} \quad r_{23} := r_{32}
 \end{aligned} \\
 & \text{funvec} \\
 & F(n\#, u\#, v\#) := \begin{cases} s := \text{var2str} \left(\frac{G \cdot m_u \cdot \Delta n_{uv}}{r_{uv}^3} \right) \\ s := \text{strrep}(s, \text{num2str}(u), \text{num2str}(u\#)) \\ s := \text{strrep}(s, \text{num2str}(v), \text{num2str}(v\#)) \\ \text{str2num}(\text{strrep}(s, \text{num2str}(n), \text{num2str}(n\#))) \end{cases}
 \end{aligned}$$

$\text{AbsTol} := 10^{-4}$
 $\text{RelTol} := 10^{-4}$
 $G := 1$
 $m_1 := 30 \quad m_2 := 2 \quad m_3 := 0.5$
 $t_{\text{end}} := 1$

$$\begin{aligned}
 & \begin{aligned}
 & x_1(0) = 0 \quad x_1'(0) = -1.3 \quad x_2(0) = -3 \quad x_2'(0) = 0.8 \quad x_3(0) = -3.1 \quad x_3'(0) = 1.5 \\
 & y_1(0) = 0 \quad y_1'(0) = -1.3 \quad y_2(0) = -0.2 \quad y_2'(0) = 0 \quad y_3(0) = -0.1 \quad y_3'(0) = 0 \\
 & x_1''(t) = F(x, 2, 1) + F(x, 3, 1) \quad y_1''(t) = F(y, 2, 1) + F(y, 3, 1) \\
 & x_2''(t) = F(x, 1, 2) + F(x, 3, 2) \quad y_2''(t) = F(y, 1, 2) + F(y, 3, 2) \\
 & x_3''(t) = F(x, 1, 3) + F(x, 2, 3) \quad y_3''(t) = F(y, 1, 3) + F(y, 2, 3)
 \end{aligned} \\
 & M := \text{dn_ExplicitRK45}(\text{funvec}, t_{\text{end}}, 1000)
 \end{aligned}$$



$$\begin{bmatrix} x_1(t) \\ y_1(t) \end{bmatrix}$$

$$\begin{bmatrix} x_2(t) \\ y_2(t) \end{bmatrix}$$

$$\begin{bmatrix} x_3(t) \\ y_3(t) \end{bmatrix}$$