

Domaca zadaca

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In[65]:= << EquationTrekker`  

In[68]:= EquationTrekker[{x'[t] - (y[t]*x[t]) / (1 + y[t]) + x[t] == 0,
                           y'[t] + (y[t]*x[t]) / (1 + y[t]) - 1 + y[t] == 0}, {x, y}, {t, -10, 10}]  

Out[68]= {EquationTrekkerState[  

          "{{x[t] - x[t] y[t] / (1 + y[t]) + x'[t] == 0, -1 + y[t] + y'[t] / (1 + y[t]) == 0}, {x, y}, {t, -10, 10}}", "{}",  

          TrekData["{x[-10.] == -0.825, y[-10.] == 0.845}", <>]  

          TrekData["{x[-10.] == 0.63, y[-10.] == 0.98}", <>]  

          TrekData["{x[-10.] == 0.825, y[-10.] == 0.855}", <>]  

          TrekData["{x[-10.] == -0.81, y[-10.] == 0.47}", <>]  

          TrekData["{x[-10.] == -0.905, y[-10.] == -0.2}", <>]  

          TrekData["{x[-10.] == -0.625, y[-10.] == -0.345}", <>], <>],  

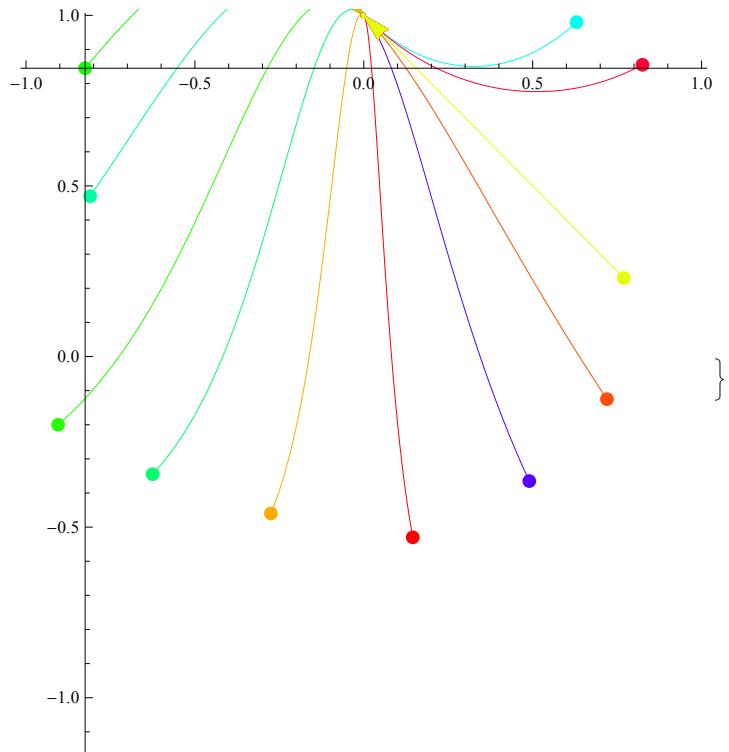
          TrekData["{x[-10.] == -0.275, y[-10.] == -0.46}", <>]  

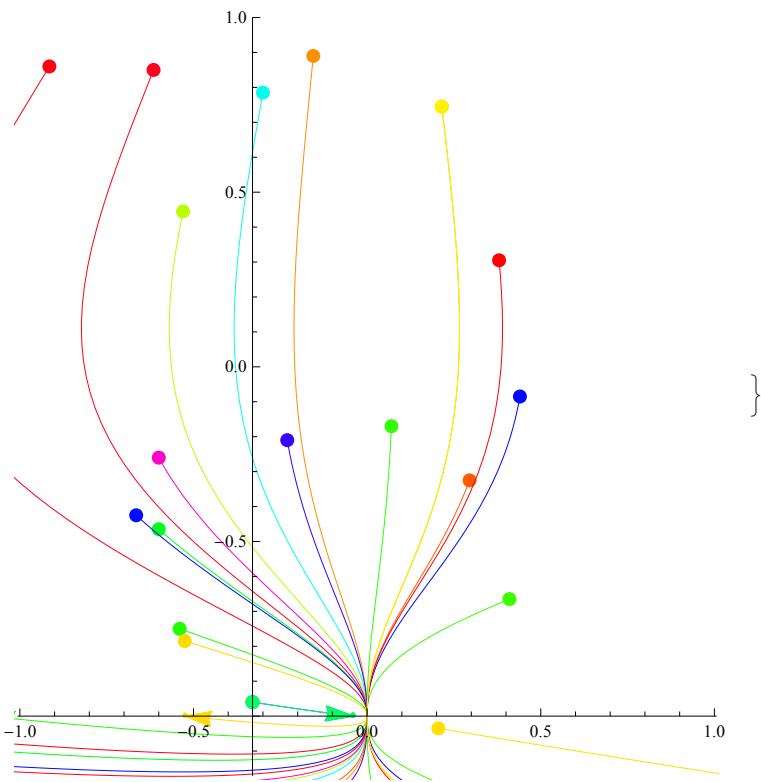
          TrekData["{x[-10.] == 0.145, y[-10.] == -0.53}", <>]  

          TrekData["{x[-10.] == 0.49, y[-10.] == -0.365}", <>]  

          TrekData["{x[-10.] == 0.72, y[-10.] == -0.125}", <>]  

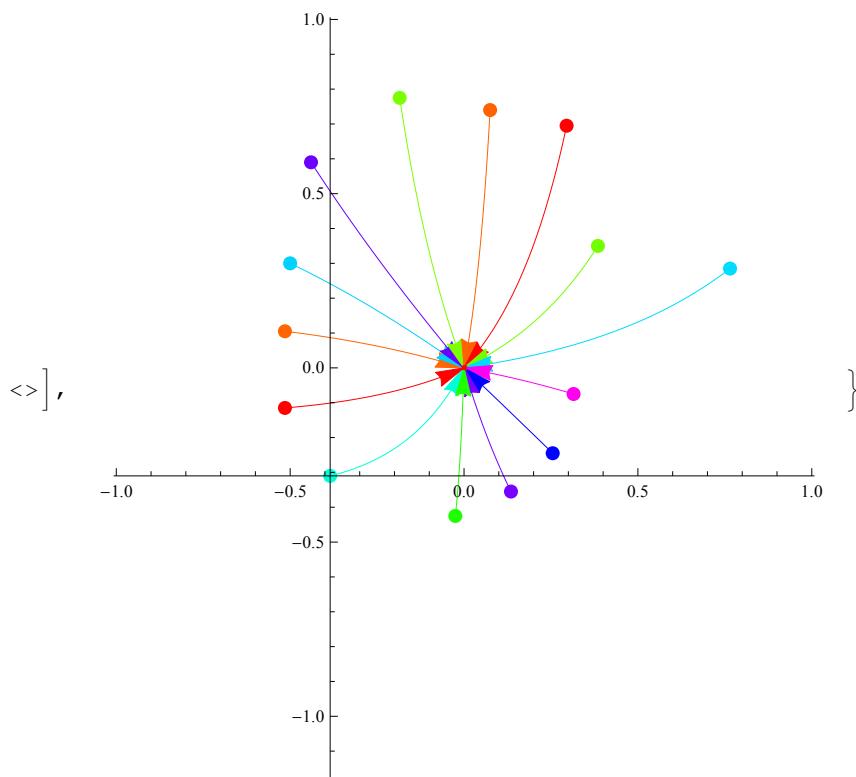
          TrekData["{x[-10.] == 0.77, y[-10.] == 0.23}", <>]
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In[70]:= EquationTrekker[{x'[t] - (y[t]*x[t]) / (1 + y[t]) + x[t] == 0,
                           y'[t] + (y[t]*x[t]) / (1 + y[t]) + y[t] == 0}, {x, y}, {t, -10, 10}]

Out[70]= {EquationTrekkerState[
  "{{x[t] - x'[t] (y[t]/(1 + y[t])) + x[t] == 0, y[t] + y'[t] (x[t]/(1 + y[t])) + y[t] == 0}, {x, y}, {t, -10, 10}}",
  TrekData[{"x[-10.] == -0.385, y[-10.] == -0.31"}, <>],
  TrekData[{"x[-10.] == -0.515, y[-10.] == 0.105"}, <>],
  TrekData[{"x[-10.] == -0.5, y[-10.] == 0.3"}, <>],
  TrekData[{"x[-10.] == -0.44, y[-10.] == 0.59"}, <>],
  TrekData[{"x[-10.] == -0.185, y[-10.] == 0.775"}, <>],
  TrekData[{"x[-10.] == 0.075, y[-10.] == 0.74"}, <>],
  TrekData[{"x[-10.] == 0.295, y[-10.] == 0.695"}, <>],
  , "{}",
  TrekData[{"x[-10.] == 0.385, y[-10.] == 0.35"}, <>],
  TrekData[{"x[-10.] == 0.765, y[-10.] == 0.285"}, <>],
  TrekData[{"x[-10.] == 0.315, y[-10.] == -0.075"}, <>],
  TrekData[{"x[-10.] == 0.255, y[-10.] == -0.245"}, <>],
  TrekData[{"x[-10.] == 0.135, y[-10.] == -0.355"}, <>],
  TrekData[{"x[-10.] == -0.025, y[-10.] == -0.425"}, <>],
  TrekData[{"x[-10.] == -0.515, y[-10.] == -0.115"}, <>]
  ]}
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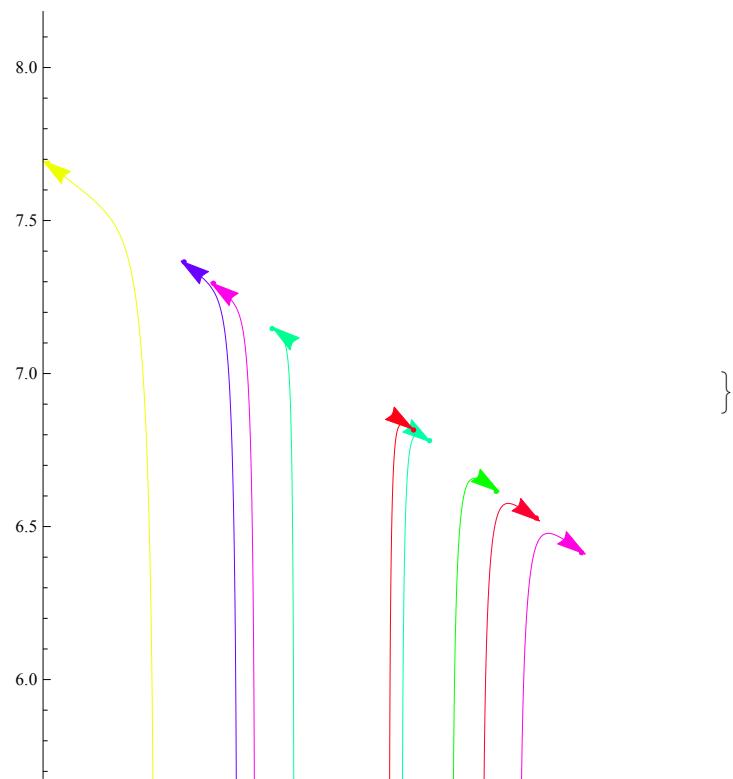


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In[79]:= EquationTrekker[{\!(*x'[t] - (1.2 * y[t] * x[t]) / (1 + y[t]) + x[t] == 0,
y'[t] + (y[t] * x[t]) / (1 + y[t]) - 7 + y[t] == 0}, {x, y}, {t, -5, 5}]

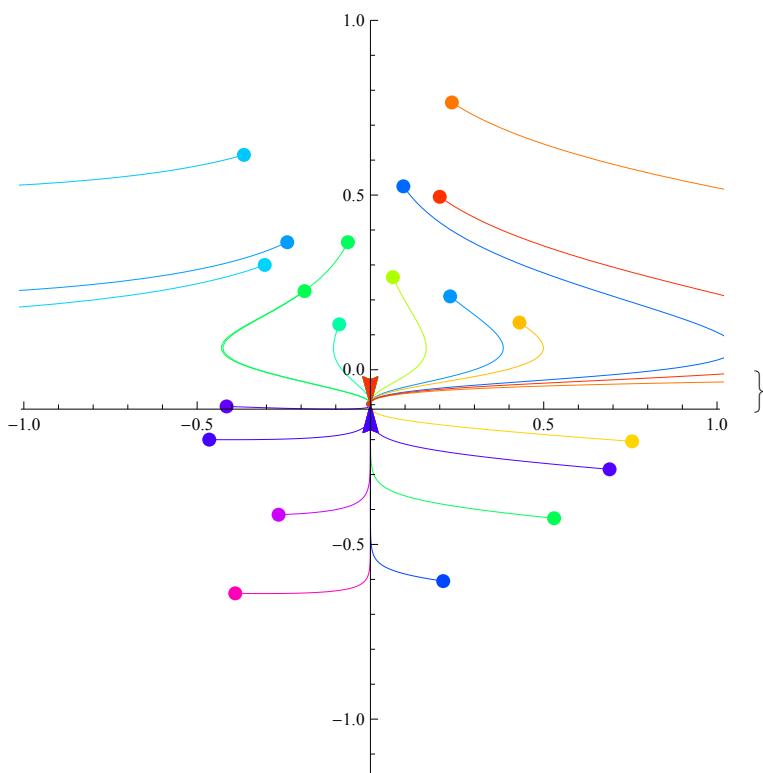
Out[79]= {EquationTrekkerState[
"\"{x[t] - \!\(\frac{1.2\ x[t]\ y[t]}{1 + y[t]}\) + x'[t] == 0, -7 + y[t] + \!\(\frac{x[t]\ y[t]}{1 + y[t]}\) + y'[t] == 0}\", {x, y}, {t, -5
, 5}]", "{}",
TrekData["{x[-5.] == -0.82, y[-5.] == -0.78}", <>]
TrekData["{x[-5.] == 0.295, y[-5.] == -0.83}", <>]
TrekData["{x[-5.] == 0.53, y[-5.] == -0.86}", <>]
TrekData["{x[-5.] == 0.83, y[-5.] == -0.86}", <>]
TrekData["{x[-5.] == -0.32, y[-5.] == -0.55}", <>], <>],
TrekData["{x[-5.] == -0.34, y[-5.] == 0.14}", <>]
TrekData["{x[-5.] == 0.51, y[-5.] == 0.12}", <>]
TrekData["{x[-5.] == -0.145, y[-5.] == 0.155}", <>]
TrekData["{x[-5.] == 0.18, y[-5.] == 0.25}", <>]

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In[82]:= EquationTrekker[{x'[t] - (17 * y[t] * x[t]) / (1 + y[t]) + x[t] == 0,
                           y'[t] + (y[t] * x[t]) / (1 + y[t]) + 0.1 + y[t] == 0}, {x, y}, {t, -7, 7}]

Out[82]= {EquationTrekkerState["\{\{x[t] - \frac{17 x[t] y[t]}{1 + y[t]} + x'[t] == 0, 0.1
                                + y[t] + \frac{x[t] y[t]}{1 + y[t]} + y'[t] == 0\}, {x, y}, {t, -7, 7}\}",
                                TrekData["{x[-7.] == -0.415, y[-7.] == -0.105}", <>]
                                TrekData["{x[-7.] == -0.09, y[-7.] == 0.13}", <>]
                                TrekData["{x[-7.] == -0.305, y[-7.] == 0.3}", <>]
                                TrekData["{x[-7.] == -0.19, y[-7.] == 0.225}", <>]
                                TrekData["{x[-7.] == 0.065, y[-7.] == 0.265}", <>]
                                TrekData["{x[-7.] == 0.23, y[-7.] == 0.21}", <>]
                                TrekData["{x[-7.] == 0.43, y[-7.] == 0.135}", <>]
                                TrekData["{x[-7.] == 0.755, y[-7.] == -0.205}", <>]
                                TrekData["{x[-7.] == 0.69, y[-7.] == -0.285}", <>]
                                TrekData["{x[-7.] == 0.53, y[-7.] == -0.425}", <>]
                                "{}",
                                TrekData["{x[-7.] == -0.39, y[-7.] == -0.64}", <>]
                                TrekData["{x[-7.] == 0.21, y[-7.] == -0.605}", <>]
                                TrekData["{x[-7.] == -0.265, y[-7.] == -0.415}", <>]
                                TrekData["{x[-7.] == -0.465, y[-7.] == -0.2}", <>]
                                TrekData["{x[-7.] == -0.365, y[-7.] == 0.615}", <>]
                                TrekData["{x[-7.] == 0.235, y[-7.] == 0.765}", <>]
                                TrekData["{x[-7.] == 0.095, y[-7.] == 0.525}", <>]
                                TrekData["{x[-7.] == -0.24, y[-7.] == 0.365}", <>]
                                TrekData["{x[-7.] == -0.065, y[-7.] == 0.365}", <>]
                                TrekData["{x[-7.] == 0.2, y[-7.] == 0.495}", <>]
                                <>],
                                <>]
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In[91]:= EquationTrekker[{x'[t] - (0.7 * y[t] * x[t]) / (1 + y[t]) + x[t] == 0,
                           y'[t] + (y[t] * x[t]) / (1 + y[t]) + 3 + y[t] == 0}, {x, y}, {t, -4, 4}]
Out[91]= {EquationTrekkerState[
  "{{x[t] - \frac{0.7 x[t] y[t]}{1 + y[t]} + x'[t] == 0, 3 + y[t] + \frac{x[t] y[t]}{1 + y[t]} + y'[t] == 0}, {x, y}, {t, -4, 4}}",
  "TrekData[\"{x[-4.] == 0.366527, y[-4.] == -1.13361}\", <>]
   TrekData[\"{x[-4.] == -0.624134, y[-4.] == -2.93495}\", <>]
   TrekData[\"{x[-4.] == 0.218328, y[-4.] == -2.61766}\", <>]
   TrekData[\"{x[-4.] == -0.372566, y[-4.] == -2.34268}\", <>]
   TrekData[\"{x[-4.] == -0.825, y[-4.] == -1.7}\", <>]
   TrekData[\"{x[-4.] == -0.56, y[-4.] == -1.63}\", <>]
   TrekData[\"{x[-4.] == -0.065, y[-4.] == -1.655}\", <>]
   TrekData[\"{x[-4.] == 0.705, y[-4.] == -1.15}\", <>]
   TrekData[\"{x[-4.] == 0.89, y[-4.] == -0.945}\", <>],
   TrekData[\"{x[-4.] == 0.435, y[-4.] == -1.72}\", <>]
   TrekData[\"{x[-4.] == 0.81, y[-4.] == -0.46}\", <>]
   TrekData[\"{x[-4.] == 0.395, y[-4.] == 0.26}\", <>]
   TrekData[\"{x[-4.] == -0.83, y[-4.] == -0.81}\", <>]
   TrekData[\"{x[-4.] == -0.775, y[-4.] == 0.08}\", <>]
   TrekData[\"{x[-4.] == -0.455, y[-4.] == 0.45}\", <>]
   TrekData[\"{x[-4.] == -0.327385, y[-4.] == -1.34616}\", <>]}, <>], , <>], , <>}, , <>]
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