In[2]:=
```
(*Начальные значения положим x(0) = 2, y(0) = 1.*)
predatorPrey[x_, a_, b_, c_, d_] := Module[
  {
    sol,
    eq1,
    eq2,
    t
  },

  eq1[t_] := x'[t] == x[t] * (a - b * y[t]);
  eq2[t_] := y'[t] == y[t] * (-c + d * x[t]);


  sol = NDSolve[
    {
      eq1[t],
      eq2[t],
      x[0] == 2,
      y[0] == 1
    },
    {x, y},
    {t, 0, 7},
    MaxSteps → 3000
  ];


  (* Строим список точек для отрисовки графика *)
  dots = Table[
    {x[t], y[t]} /. sol[[1]],
    {t, 0, 7, 0.01}
  ];


  ListPlot[dots, Joined → True, PlotRange → All, ImageSize → 500]
]
```

In[1]:=
```
Manipulate[
  predatorPrey[x, a, b, c, d],

  (* Ползунки *)
  {a, 1, 10, 1},
  {b, 1, 10, 1},
  {c, 1, 10, 1},
  {d, 1, 10, 1}
]
```

Out[1]=