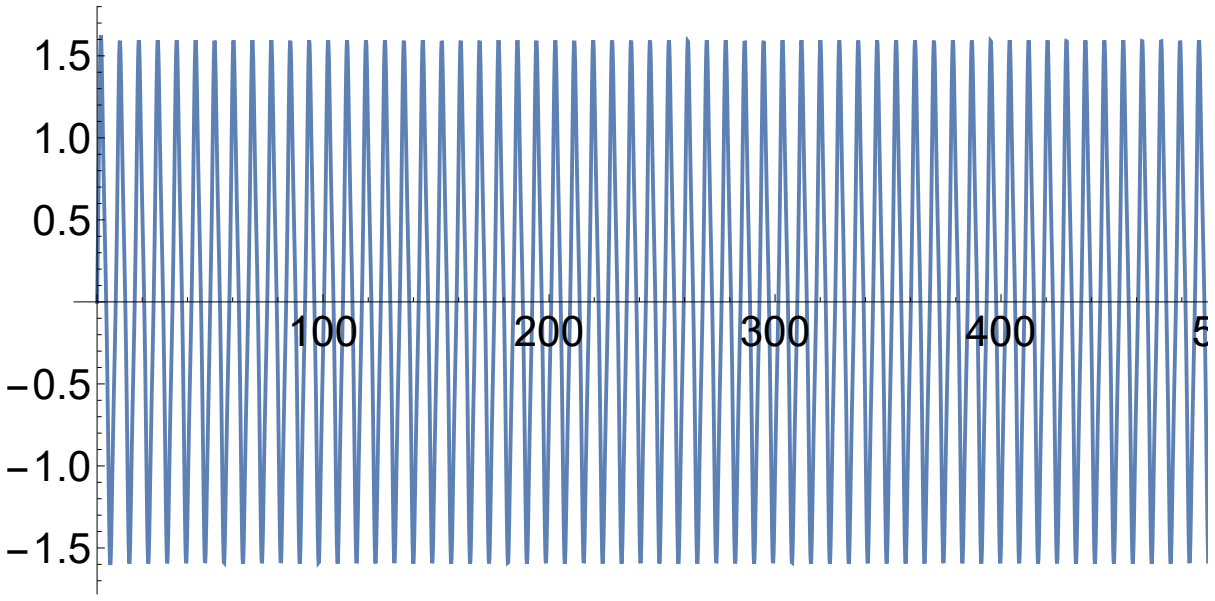
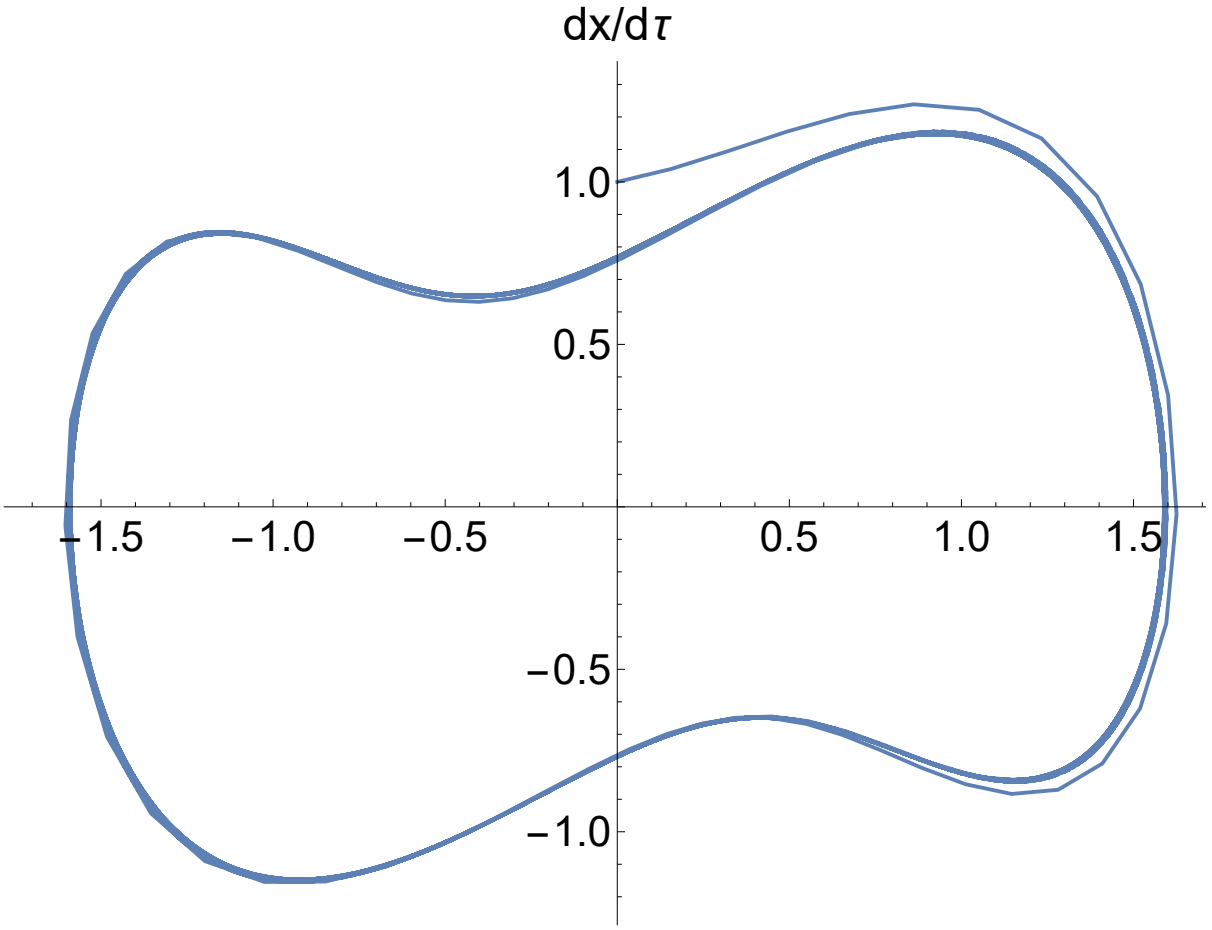
In[ ]:=
```
eqa = x''[t] + μ x'[t] - x[t] + (x[t])^3 - η Cos[Ω t];
                                          余弦

η = 1;
μ = 0.8;
Ω = 0.75;
tstep = 0.1;
totalpoints = 5000;
recordtime = tstep * totalpoints;
duff[t_] = NDSolve[{eqa == 0, x[0] == 0, x'[0] == 1}, x[t], {t, 0, 500}][[1, 1, 2]];
           数值求解微分方程组
recordsignal = Table[duff'[n * tstep], {n, 0, totalpoints}];
               表格
transform = Abs[Fourier[recordsignal]]^2;
            …  傅立叶
frequencies = Table[n / recordtime, {n, 0, totalpoints}];
              表格
data = Transpose[{frequencies, transform}];
       转置
Plot[duff[t], {t, 0, 500}, AxesLabel → {Style["t", Large]},
绘图                      坐标轴标签      样式          大
 AxesLabel → {Style["x", Large]}, AxesStyle → Directive[22], AspectRatio → 0.5]
 坐标轴标签      样式          大          坐标轴样式      指令              宽高比
ParametricPlot[{duff[t], duff'[t]}, {t, 0, 500},
绘制参数图
 AxesLabel → {Style["x", Large], Style["dx/dτ", Large]},
 坐标轴标签      样式          大          样式              大
 AspectRatio → 0.7, AxesStyle → Directive[22]]
 宽高比               坐标轴样式      指令
ListPlot[data, Joined → True, PlotRange → {{0, 0.7}, {0, 20}},
绘制点集          连接点          真      绘制范围
 AxesLabel → {Style["(Hz)", Large], Style["谱强度", Large]}, AxesStyle → Directive[24]]
 坐标轴标签      样式          大          样式              大          坐标轴样式      指令
```

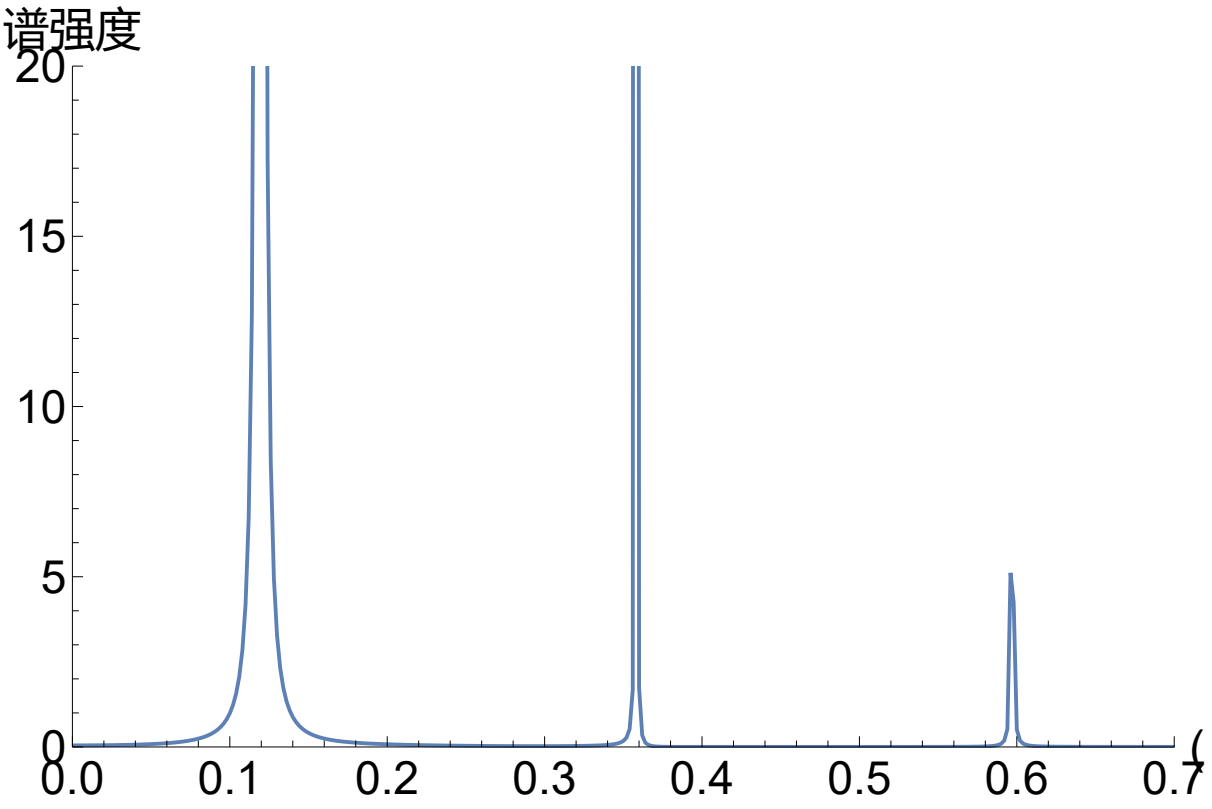
Out[ ]=



Out[•]=


dx/dτ
1.0
0.5
−1.5
−1.0
−0.5
0.5
1.0
1.5
−0.5
−1.0

Out[•]=


谱强度
20
15
10
5
0
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7