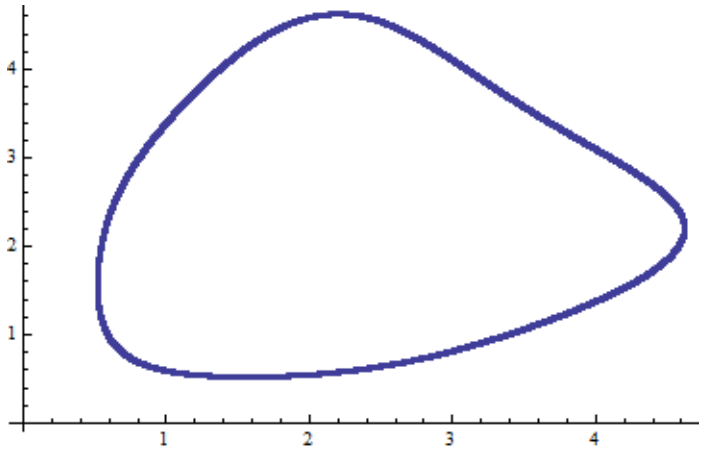
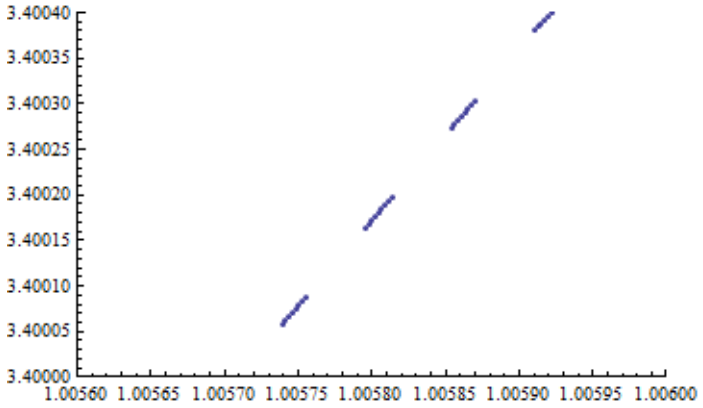
```
F[{x_, y_}] = {y, (y + 1 / y) / x}
```

$$\left\{y, \frac{\frac{1}{y}+y}{x}\right\}$$

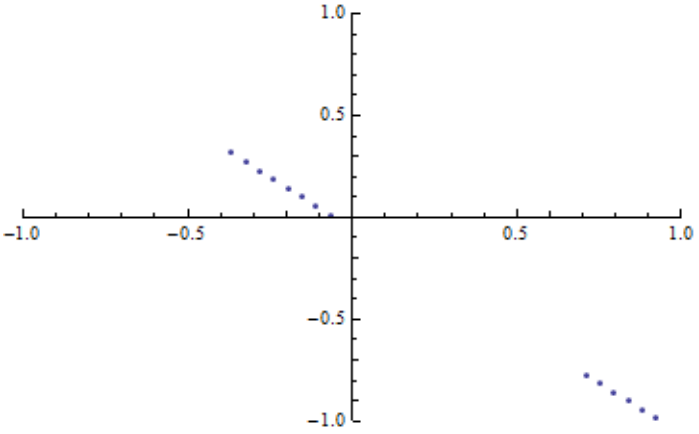
```
SeedRandom[1];
ListPlot[NestList[F, {Random[], Random[]}, 100 000]] // Rasterize
```




```
SeedRandom[1];
ListPlot[NestList[F, {Random[], Random[]}, 1 000 000],
  PlotRange → {1.0058, 3.4002} + 0.0002 {{-1, 1}, {-1, 1}}] // Rasterize
```



```
SeedRandom[1];
ListPlot[(10 000 (# - {3.5, 3.571 - 0.266 / 1000})) & /@
    NestList[F, {Random[], Random[]}, 1 000 000],
  PlotRange → {{-1, 1}, {-1, 1}}] // Rasterize
```




```
SeedRandom[1]; p0 = {Random[], Random[]};
ListPlot[NestList[F, p0, 1 000 000],
  PlotRange → p0 + 0.00001 {{-1, 1}, {-1, 1}}] // Rasterize
```