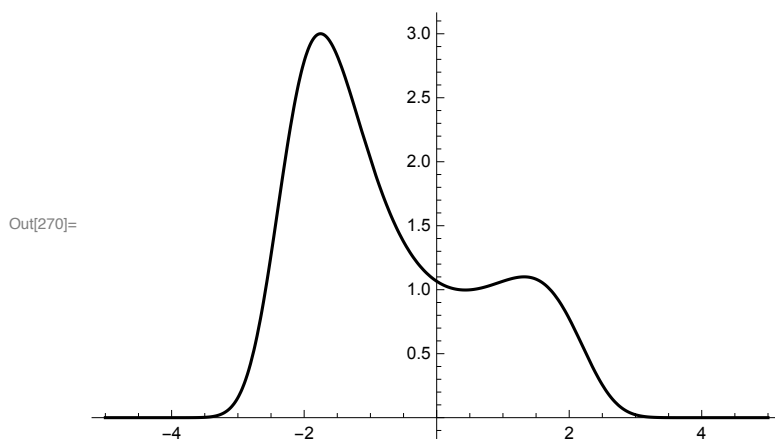


Reject Sampling Monte Carlo

■ Reject Sampling Monte Carlo

```
In[115]:= f[x_] := Exp[0.4 (x - 0.4)^2 - 0.08 x^4]
```

```
In[270]:= P0 = Plot[f[x], {x, -5, 5}, PlotStyle -> Black]
```



```
In[125]:= x := 10 * RandomReal[] - 5
```

```
In[128]:= y := 5 * Random[]
```

```
In[130]:= sx = x; sy = y;
```

```
In[133]:= f[x]
```

```
Out[133]= 0.998394
```

```
In[134]:= f[x]
```

```
Out[134]= 0.00108828
```

```
In[263]:= Clear[sx, sy, L, LO];
```

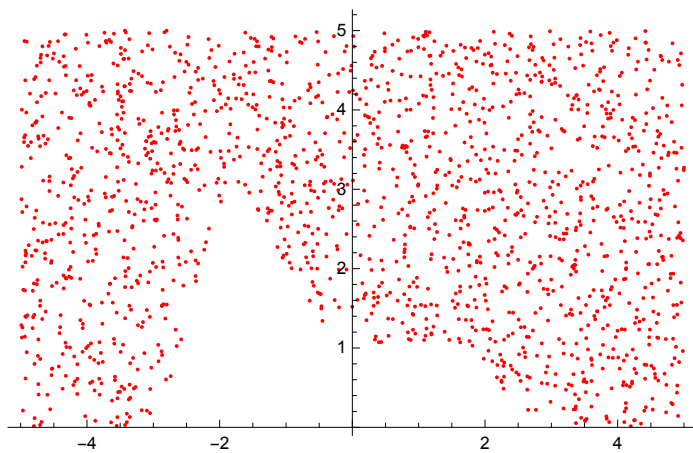
```
In[264]:= L = {}; LO = {};
```

```
In[265]:= Timing[For[i = 0, i < 10 001, i++, sx = x;  
    sy = y;  
    If[f[sx] > sy, L = Append[L, {sx, sy}];  
    Clear[sx, sy], LO = Append[LO, {sx, sy}]]]]
```

```
Out[265]= {0.453546, Null}
```

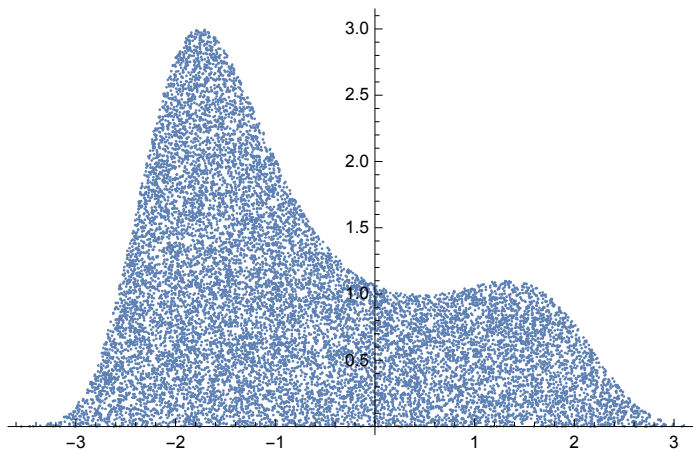
```
In[251]:= ListPlot[LO, PlotStyle -> Red]
```

Out[251]=



```
In[238]:= ListPlot[L]
```

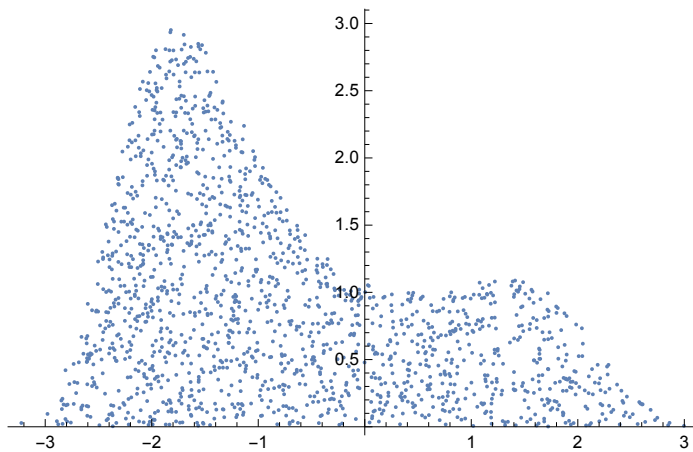
Out[238]=



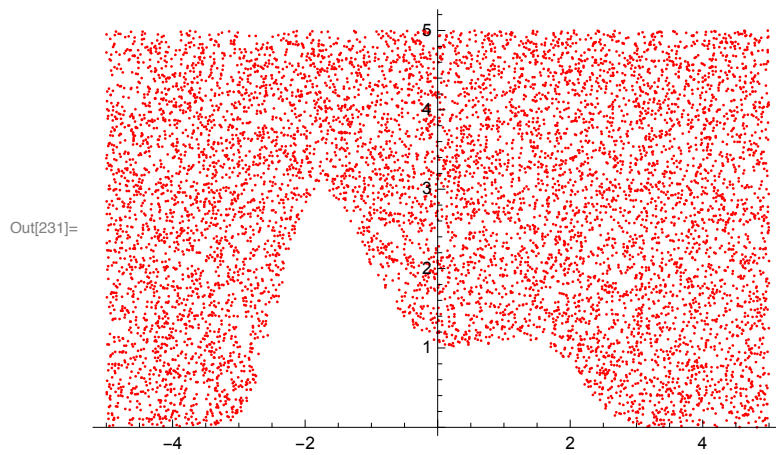
Time

```
In[230]:= P = ListPlot[L]
```

Out[230]=



```
In[231]:= PO = ListPlot[LO, PlotStyle -> Red]
```



```
In[271]:= Show[P, PO, P0]
```

