

The following function `CoinSim[n]` generates a simulation of a fair coin being tossed  $n$  times:

```
CoinSim[n_] := Module[{population, Pr, sim},
  population = Table[RandomInteger[], {n}];
  Pr[k_] := Table[Mean[Take[population, i]], {i, 1, k}];
  sim = Manipulate[ListPlot[Pr[j], PlotRange -> {{0, Automatic}, {-0.1, 1.1}}, PlotStyle ->
    {PointSize[0.015]}, AxesLabel -> {TraditionalForm["n"], TraditionalForm["fn(H)"]}],
    {{j, 1, TraditionalForm["n"]}, 1, Length[population], 1}];
  sim]
CoinSim[1000]
```

