Here we test several functions.

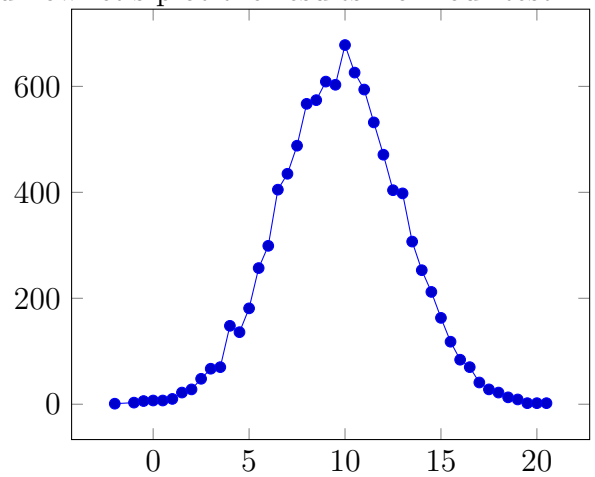
```
import Plot.Histogram
import Sampleable
import qualified Sampleable.Dist as SDist
import Control.Monad
import qualified Data.ByteString.Lazy as B
import Data.Csv
import Inferable
import Inferable.MH
import qualified Inferable.Dist as IDist

main :: IO ()
main = do
```

Let's test the normal distribution.

```
  putStrLn "Testing normals..."
  normals ← sampleIO $ replicateM 10000 $ SDist.normal 10 10
  B.writeFile "./test/testFiles/normals.csv" $ encode $ histStep 0.5 normals
  putStrLn "Completed Normals Test"
```

And now let's plot the results from our test:



Let's test a normal distribution conditioned on being $\geqslant 8$ with the same mean and variance:

```
  putStrLn "Testing conditioned normals..."
  conditionedNormals ← sampleIO $ mh 10000 1 $ do
```

```
    x ← IDist.normal 10 10
    condition $ x ⩾ 8
    return x
  B.writeFile "./test/testFiles/conditionedNormals.csv" $ encode $ histStep 0.5 $ take 9
  putStrLn "Completed conditioned normals test."
```

And now we plot: