

Example of checking the theoretical density against a simulation for the density of $Z = X + U$ where X is `exponential(1)` and U is `uniform(0,1)`.

```
> z <- seq(0,10,.1)
> y <- length(z)
> f <- function(z) {
+ if(z < 1) return(1-exp(-z))
+ else return(exp(-z)*(exp(1)-1))
+ }
> for(i in 1:length(z)) {
+ y[i] <- f(z[i])
+ }
> x <- rexp(10000)
> u <- runif(10000)
> tot <- x+u
> hist(tot,nclass=100,prob=TRUE)
> points(z,y,type="l") # adds points of the theoretical pdf to the histogram
```

