```
> library(dslabs)
> library(tidyverse)
> library(caret)
> data(heights)
> set.seed(1, sample.kind = 'Rounding')
Warning message:
In set.seed(1, sample.kind = "Rounding") :
  non-uniform 'Rounding' sampler used
> x <- heights$height
> y <- heights$sex
> test_index <- createDataPartition(y, times = 1, p = 0.5, list = FALSE)
> test_set <- heights[test_index, ]
> train_set <- heights[-test_index, ]
> delta <- seq(1, 101, 3)
> F_1 <- sapply(delta, function(x){
+ fit <- knn3(sex ~ height, data = train_set, k = x)
+ y_hat <- predict(fit, test_set, type = "class") %>%
+ factor()
+ F_meas(data = y_hat, reference = test_set$sex)
+ })
> plot(delta, F_1)
> max(F_1)
[1] 0.6019417
> delta[which.max(F_1)]
[1] 46
>
```