

CSC505 – HW 1

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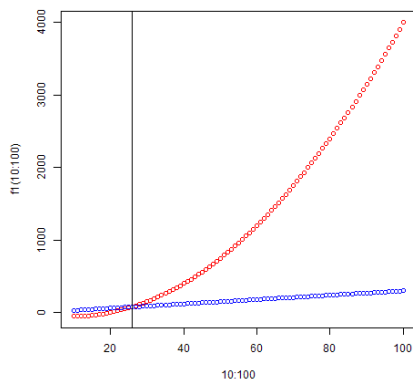
The following two problems were solved here with R and the following code :

```
f1 <- function( x ) <<function f>>
g1 <- function( x ) <<function g>>
rt <- function( x ) ( f1(x) - g1(x) )

png(filename="plot1.png")
plot ( 10:100, f1( 10:100), pch=21, col="red" )
points( 10:100, g1( 10:100), pch=21, col="blue" )

root = uniroot( rt, c(10,100))$root
abline( v = root )
print( root )
```

- 1.) The computed root here was $n=26$ and the following plot was produced with $f1$ in red and $g1$ in blue. It is clear that $f1$ is the faster growing equation.



- 2.) The computed root in the second set of equations was $n=98.794$ and the following plot was produced with $f2$ in red and $g2$ in blue. It is clear that in this case $g2$ is the faster growing equation.

