Graficos

Gráficos con la función `plot`

```
alumnos = c(1:10)
notas = c(4,7,8,5,9,8,7,7,10,6)
plot(alumnos,notas)
```

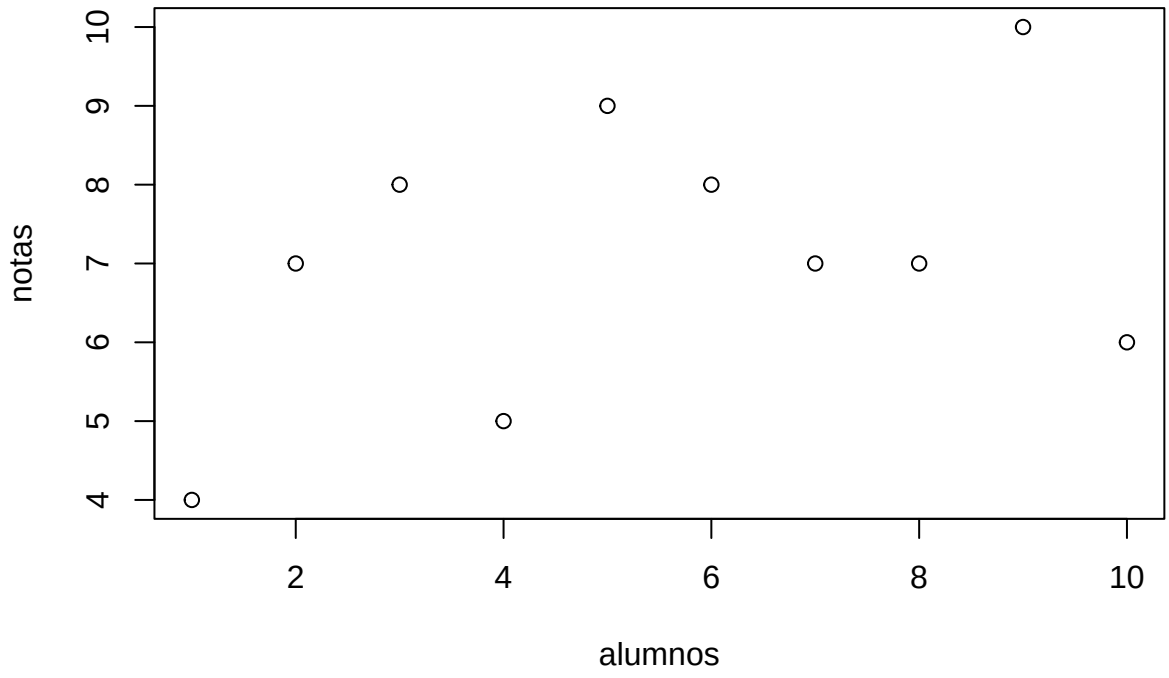
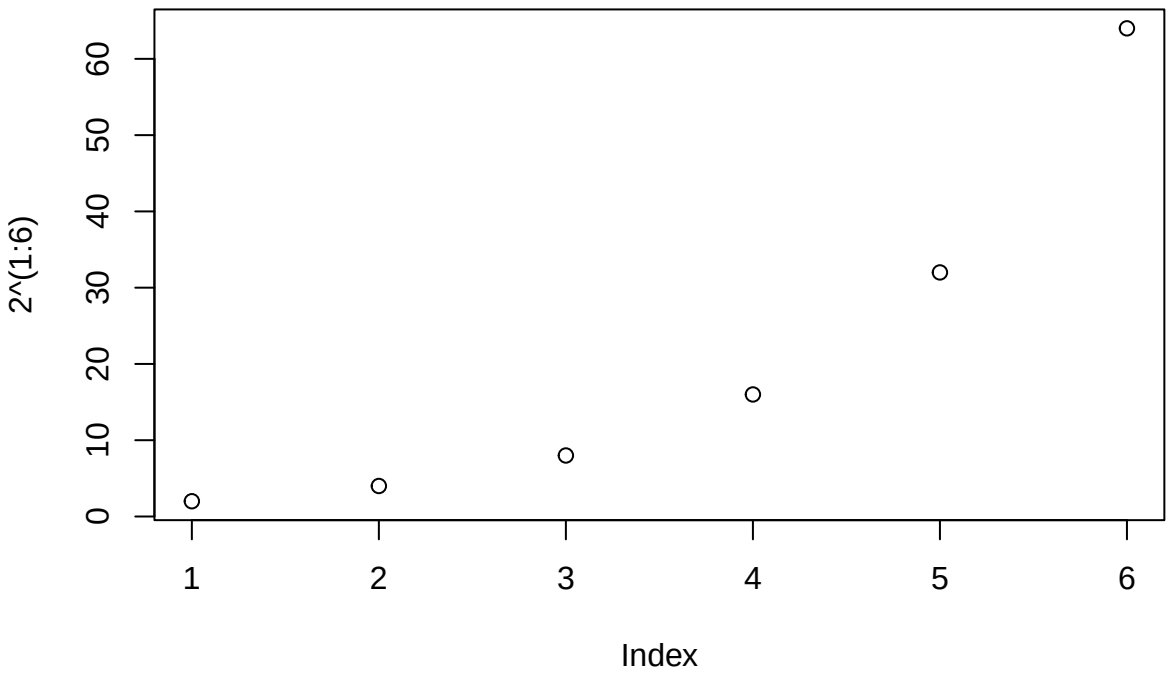


Figure 1: Gráfico básico de puntos explicando el uso del plot

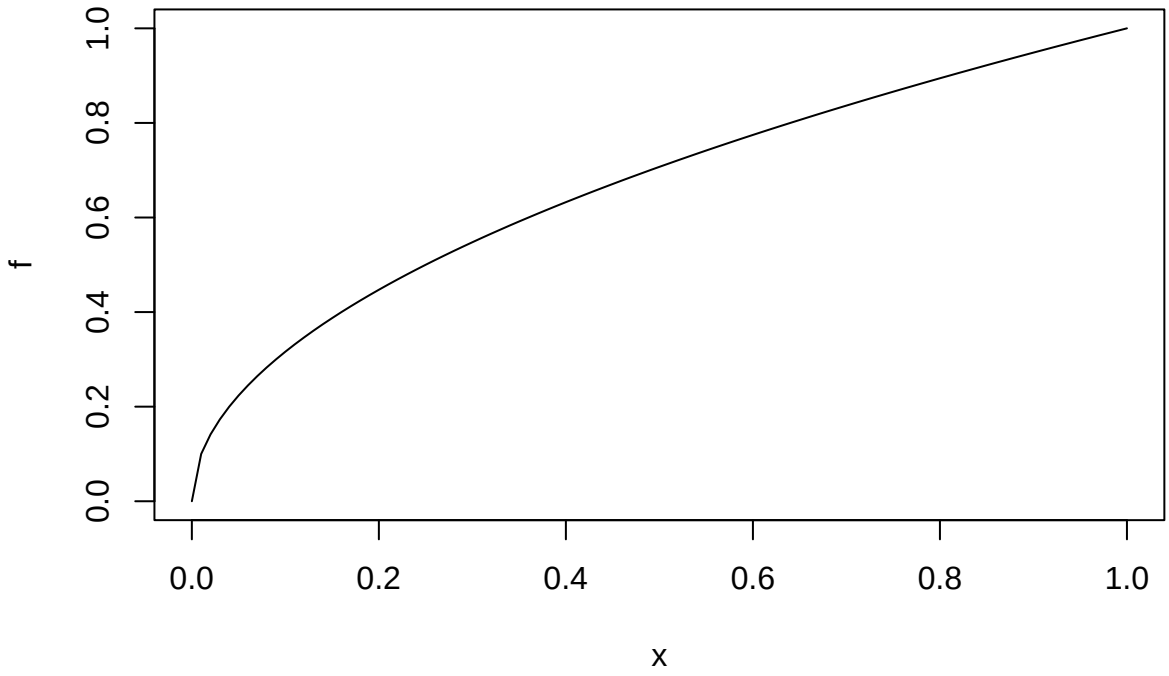
Si no incorporamos vector `y`, `R` nos va a tomar el parámetro `x` como si fuese el vector de datos `y` : `plot(1:n, x)`

```
plot(2^(1:6))
```



Si queremos representar una función $f(x)$:

```
f <- function(x){sqrt(x)}
plot(f)
```

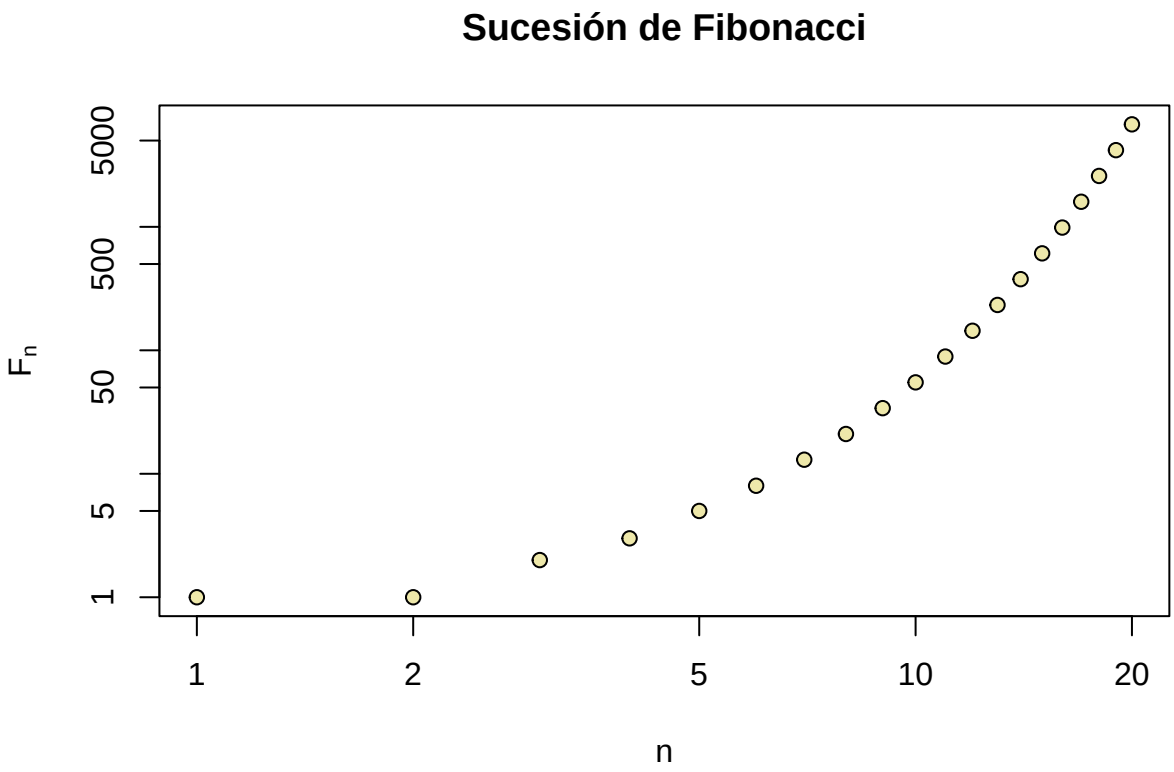


Parámetros

```
n = 1:20
fib = (1/sqrt(5))*((1+sqrt(5))/2)^n-(1/sqrt(5))*((1-sqrt(5))/2)^n
fib
```

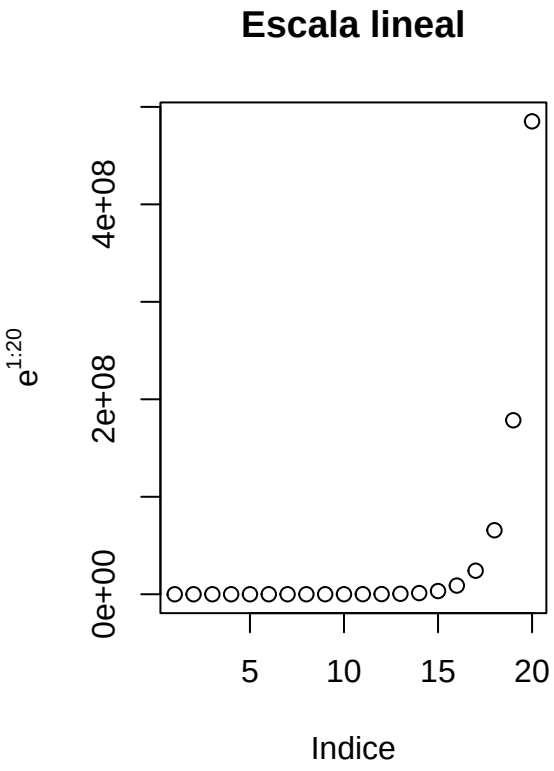
```
##  [1]    1    1    2    3    5    8   13   21   34   55   89  144  233  377  610
## [16]  987 1597 2584 4181 6765
```

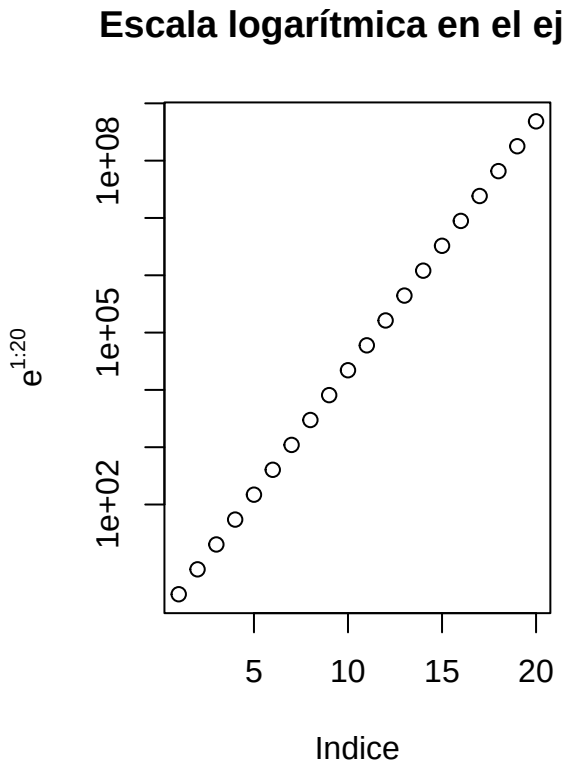
```
plot(fib, xlab="n", ylab= expression(F[n]),
     main = "Sucesión de Fibonacci", pch = 21, cex = 1, col = "black", bg = "palegoldenrod", log = "xy")
```



Escála logarítmica

```
par(mfrow = c(1,2))
plot = plot(exp(1:20), xlab = "Indice", ylab = expression(e^{1:20}),
            main = "Escala lineal")
plotLog = plot(exp(1:20), log = "y", xlab = "Indice",
               ylab = expression(e^{1:20}),
               main = "Escala logarítmica en el eje y")
```


Escala lineal
e^1:20
0e+00
2e+08
4e+08
5
10
15
20
Indice


Escala logarítmica en el eje y
e^1:20
1e+02
1e+05
1e+08
5
10
15
20
Indice