Varying values of parameters

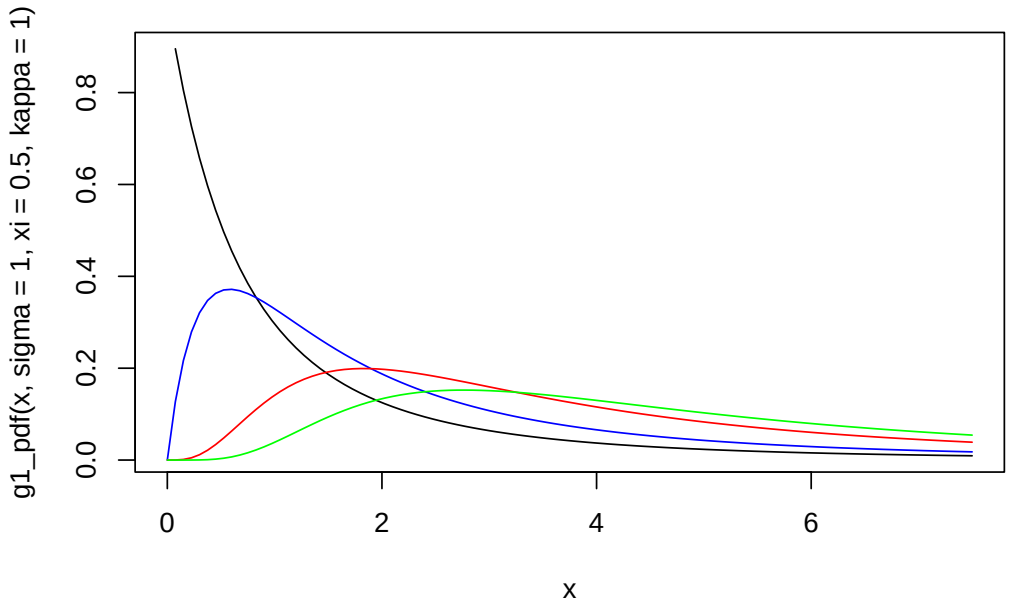
1. $G(v) = v^{\kappa},\ \kappa > 0$

$$F_1(x) = \{1 - [1 + \xi(\frac{x}{\sigma})]^{-1/\xi}\}^{\kappa}$$

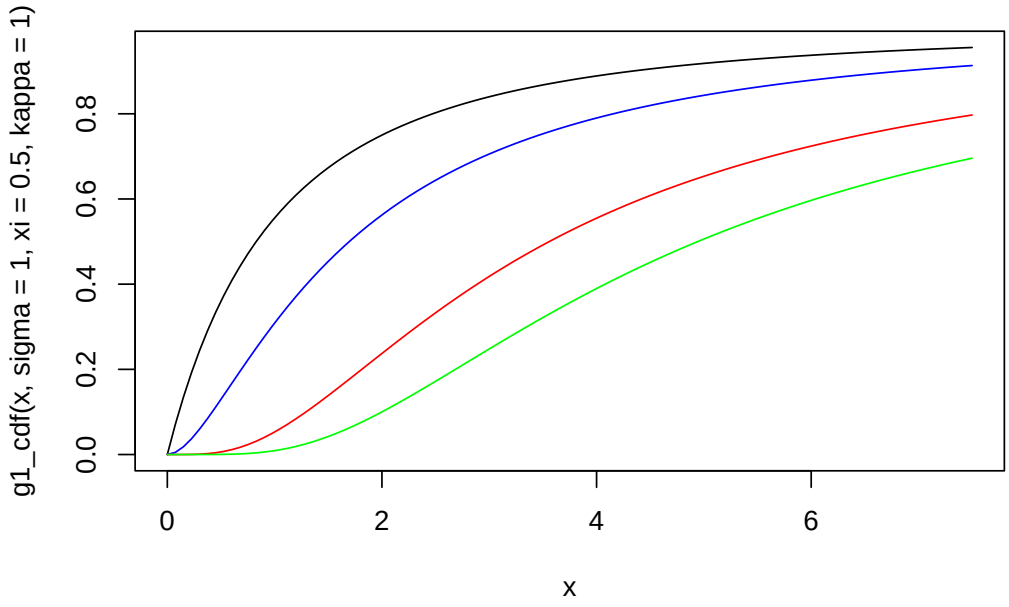
$$f_1(x) = \frac{\kappa}{\sigma}[1 + \xi(\frac{x}{\sigma})]^{-(1/\xi+1)}\{1 - [1 + \xi(\frac{x}{\sigma})]^{-1/\xi}\}^{\kappa-1}$$

κ varying: pdf

```
curve(g1_pdf(x, sigma = 1, xi = 0.5, kappa = 1), xlim = c(0, 7.5))
curve(g1_pdf(x, sigma = 1, xi = 0.5, kappa = 2), xlim = c(0, 7.5), add = TRUE, col = 'blue')
curve(g1_pdf(x, sigma = 1, xi = 0.5, kappa = 5), xlim = c(0, 7.5), add = TRUE, col = 'red')
curve(g1_pdf(x, sigma = 1, xi = 0.5, kappa = 8), xlim = c(0, 7.5), add = TRUE, col = 'green')
```

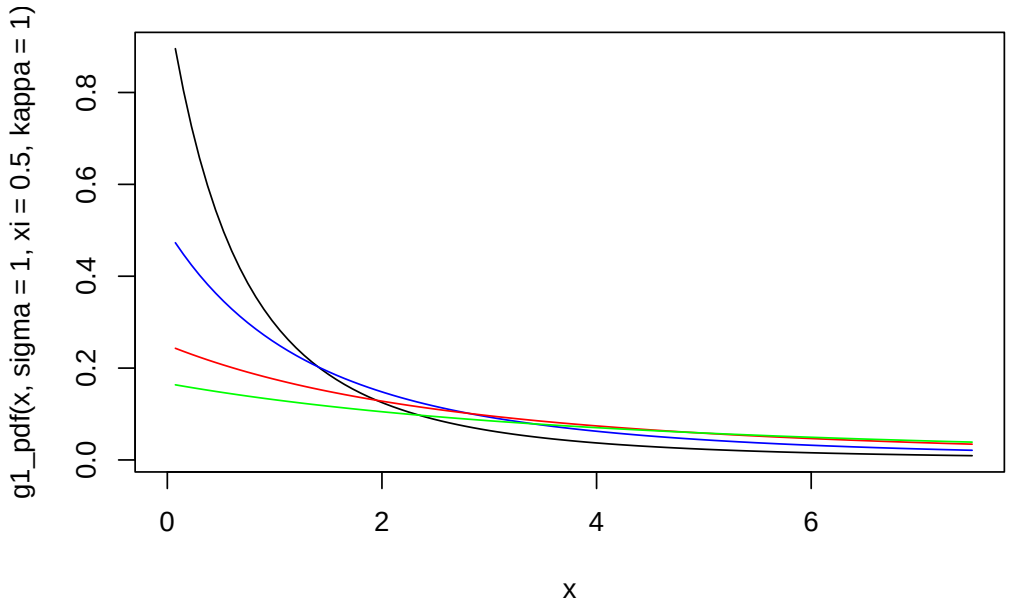


κ varying: cdf



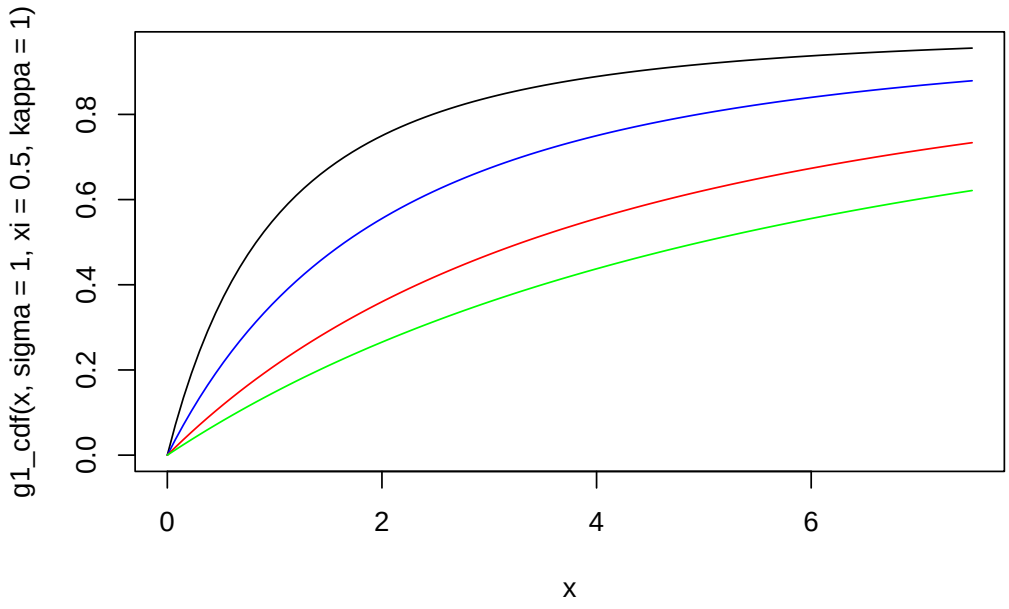
σ varying: pdf

```
curve(g1_pdf(x, sigma = 1, xi = 0.5, kappa = 1), xlim = c(0, 7.5))
curve(g1_pdf(x, sigma = 2, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'blue')
curve(g1_pdf(x, sigma = 4, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'red')
curve(g1_pdf(x, sigma = 6, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'green')
```



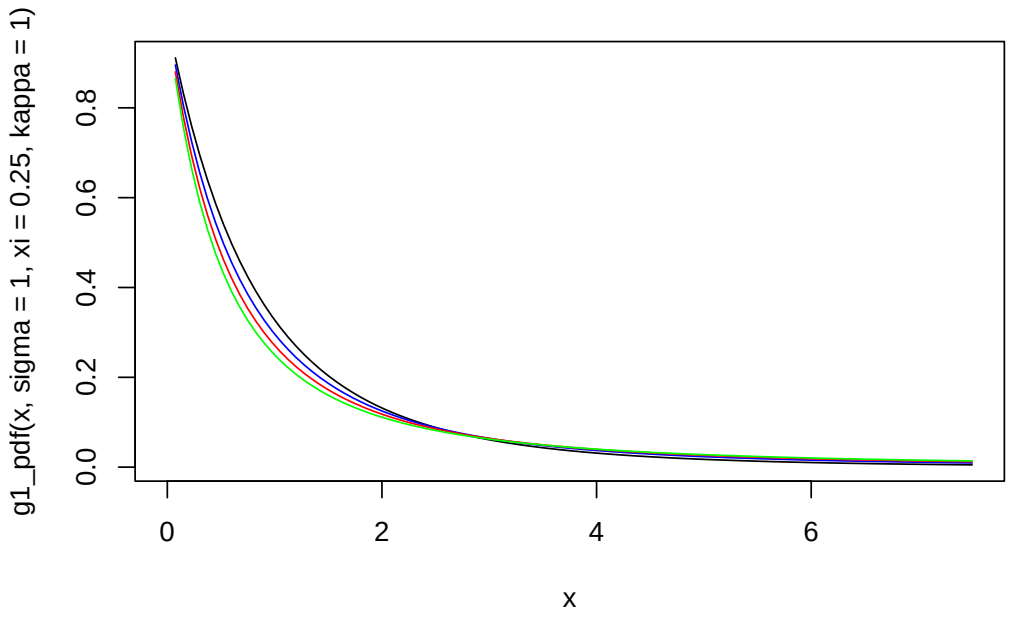
σ varying: cdf

```
curve(g1_cdf(x, sigma = 1, xi = 0.5, kappa = 1), xlim = c(0, 7.5))
curve(g1_cdf(x, sigma = 2, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'blue')
curve(g1_cdf(x, sigma = 4, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'red')
curve(g1_cdf(x, sigma = 6, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'green')
```



ξ varying: pdf

```
curve(g1_pdf(x, sigma = 1, xi = 0.25, kappa = 1), xlim = c(0, 7.5))
curve(g1_pdf(x, sigma = 1, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'blue')
curve(g1_pdf(x, sigma = 1, xi = 0.75, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'red')
curve(g1_pdf(x, sigma = 1, xi = 1, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'green')
```



ξ varying: cdf

```
curve(g1_cdf(x, sigma = 1, xi = 0.25, kappa = 1), xlim = c(0, 7.5))
curve(g1_cdf(x, sigma = 1, xi = 0.5, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'blue')
curve(g1_cdf(x, sigma = 1, xi = 0.75, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'red')
curve(g1_cdf(x, sigma = 1, xi = 1, kappa = 1), xlim = c(0, 7.5), add = TRUE, col = 'green')
```