

$$f(x) = \frac{\lambda^\alpha}{\Gamma(\alpha)} x^{\alpha-1} e^{-\lambda x}$$

$$= \frac{\beta^\alpha}{\Gamma(\alpha)} x^{\alpha-1} e^{-\beta x}$$

$$\tilde{f}(\lambda) = \frac{\beta^\alpha}{\Gamma(\alpha)} \lambda^{\alpha-1} e^{-\beta \lambda}$$

$$\alpha \lambda^{\alpha-1} e^{-\beta \lambda}$$

$$f(x) = \frac{1}{\sqrt{2\pi}\sigma} \exp\left(-\frac{(x-\mu)^2}{2\sigma^2}\right)$$

$$= \sqrt{\frac{\delta\lambda}{2\pi}} \exp\left(-\frac{\delta\lambda}{2}(x-\gamma)^2\right)$$

$$g(\mu|\lambda) \propto \lambda^{1/2} \exp\left(-\frac{\delta\lambda}{2}(\mu-\gamma)^2\right)$$