An 15b) 
$$y = 2^{a-1}e^{-2x}$$

$$\frac{dy}{dx} = -x^{a-1} \cdot e^{-2} + (a-1)(e^{-2}x^{a-2}) = 0$$

$$= \begin{cases} (a-1) - x \\ = 0 \end{cases}$$

$$= \begin{cases} (a-1) + x \\ (a-1) \end{cases}$$
Clearly  $\frac{d^2y}{dx^2} > 0$ 

$$(x = a-1) + x$$
The maxima.

$$= \begin{cases} (x - a) + x \\ (x - a) \end{cases}$$
The proved  $= \begin{cases} (x - a) \\ (x - a) \end{cases}$