

121 a. $A = e^{x-1} \times e = e^{x-1+1} = e^x$

$$\begin{aligned} B &= (e \times e^{x-1})^2 \times e^{-x} = (e^{1+x-1})^2 \times e^{-x} \\ &= (e^x)^2 \times e^{-x} \\ &= e^{2x} \times e^{-x} \\ &= e^{2x-x} \\ &= e^x \end{aligned}$$

b. $A = e \times (e^{-x+1})^2 = e^1 \times e^{2(-x+1)}$
 $= e^{1+2(-x+1)}$
 $= e^{-2x+3}$

$$\begin{aligned} B &= \frac{e^{-x-2}}{e \times e^{x-1}} = \frac{e^{-x-2}}{e^{1+x-1}} \\ &= e^{-x-2-x} \\ &= e^{-2x-2} \end{aligned}$$