

1. 1. 11

3MS

$$2) \lim_{x \rightarrow 0} \frac{e^{x \ln 8} - e^{x \ln 2}}{4x} = \ll \frac{e^0 - e^0}{0} \gg = \ll \frac{0}{0} \gg$$

IND.

$$\lim_{x \rightarrow 0} \frac{e^{x \ln 8} \cdot \ln 8 - e^{x \ln 2} \cdot \ln 2}{4} = \frac{\ln 8 - \ln 2}{4}$$

$$= \frac{\ln 2^3 - \ln 2}{4} = \frac{3 \ln 2 - \ln 2}{4} = \frac{2 \ln 2}{4}$$

$$= \frac{\ln 2}{2}$$

B.-H.

$$\Rightarrow \lim_{x \rightarrow 0} \frac{8^x - 2^x}{4} = \ln 2 \cdot \frac{1}{2}$$

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3MS

2

$$b) \lim_{x \rightarrow -1} \frac{\ln(x+2)}{\ln(5)} \cdot \frac{1}{x+1} = \ll \frac{0}{0} \gg$$

INDÉTERMINÉ

$$\lim_{x \rightarrow -1} \frac{(\ln(x+2))'}{(\ln(5) \cdot (x+1))'} = \lim_{x \rightarrow -1} \frac{(x+2)'}{\ln(5) \cdot 1}$$

$$= \lim_{x \rightarrow -1} \frac{1}{x+2} \cdot \frac{1}{\ln(5)} = \frac{1}{-1+2} \cdot \frac{1}{\ln(5)}$$

$$= \frac{1}{1} \cdot \frac{1}{\ln(5)} = \frac{1}{\ln(5)}$$

B.-H.

$$\Rightarrow \lim_{x \rightarrow -1} \frac{\log_5(x+2)}{x+1} = \frac{1}{\ln(5)}$$