**Problem statement** Does either of these improper double integrals converge? If not, explain why. If yes, evaluate. Explain your answers.

a) 
$$\iint_{\mathbf{R}^2} e^{-|x|-|y|} dA$$
 b) 
$$\iint_{\mathbf{R}^2} e^{-|x+y|} dA$$