CALCULUS
Properties of the definite integral
NEW
Which of the following is true?

a. \( \int_{\pi}^{2\pi} \sin^4 x \leq 0 \)

b. \( \int_{\pi}^{2\pi} \sin^4 x \geq 0 \)

Explain your choice, invoking the properties of integrals.
Which of the following is true?

a. $\int_{-2}^{-3} e^{-x} \, dx \leq \int_{-2}^{-3} e^{-2x} \, dx$

b. $\int_{-2}^{-3} e^{-x} \, dx \geq \int_{-2}^{-3} e^{-2x} \, dx$

Explain your choice, invoking the properties of integrals.