CALCULUS
Properties of the definite integral
NEW

0630-1.
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.

0630-2.
NEW

Which of the following is true?

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

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

Explain your choice, invoking the properties of integrals.