

Odd and Even Functions

M Mouse

March 2019

PLEASE ANSWER THE FOLLOWING QUESTIONS.

1. The product of an odd and even function is [5]

A. Odd

B. Even

C. Neither

2. The square of any function is an even function. [5]

A. True

B. False

3. What is the value of the following integral? [5]

$$\int_{-\pi}^{\pi} x^3 \cos(x) dx$$

A. $-\pi^4/8$

B. $\pi^4/8$

C. $\pi^4/4$

D. $-\pi^4/4$

E. None of the above

4. Let $f(x) = x^3 \cos(x)$. The value of the corresponding integral on the interval $[-\pi, \pi]$ is given by [5]

A. $-\pi^4/8$

B. $\pi^4/8$

C. $\pi^4/4$

D. $-\pi^4/4$

E. None of the above