

1. True or False?

$$\int_2^{10} \frac{dx}{x} = \ln(5).$$

2. True or False?

$$\int_0^{\pi} \sin(2x) \, dx = 0.$$

3. What is  $\int_{-1}^1 |2x^3| dx$ ?

(A) 0

(B) 1

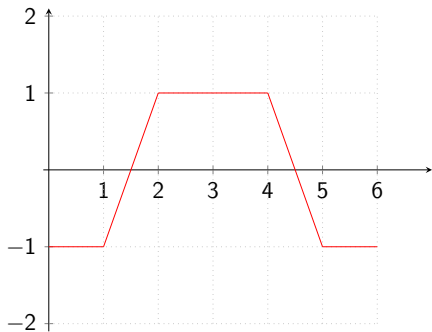
(C) 2

(D) None of the above

4. The graph of a function  $f$  is depicted to the right, and

$$A(x) = \int_0^x f(t) dt.$$

For which  $x$  does  $A(x) = 0$ ?

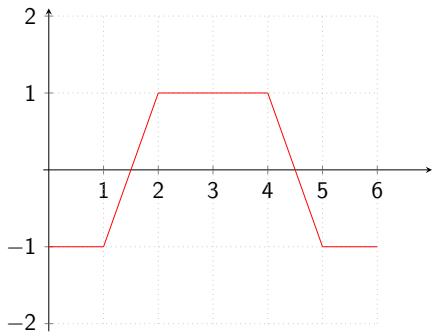


- (A)  $x = 1$
- (B)  $x = 2$
- (C)  $x = 3$
- (D) None of the above

5. The graph of a function  $f$  is depicted to the right, and

$$A(x) = \int_0^x f(t) dt.$$

Where does  $A$  have a critical point?



- (A)  $x = 1$
- (B)  $x = 2$
- (C)  $x = 3$
- (D) None of the above

6. True or False?

The function  $f(x) = |x|$  has an antiderivative.