

# Make-up Quiz 4

! This is a preview of the published version of the quiz

Started: Nov 25 at 6:13am

## Quiz Instructions

### Question 1

1 pts

True or False:  $\int_{-1}^1 \left( 5x^5 - 9x^9 + \frac{\cos(x)}{(1+x^3)} \right) dx = 0$

### Question 2

1 pts

True or False: If  $f$  and  $g$  are continuous on  $[a, b]$ , then  $\left( \int_a^b [f(x)g(x)] dx \right)^2 = \left( \int_a^b f(x) dx \right)^2 \left( \int_a^b g(x) dx \right)^2$ .

**Question 3****1 pts**

Find the derivative of the function  $f(x) = \int_{2x}^{3x+1} \sin(t^4) dt$ .

**Question 4****1 pts**

A particle moves along a line with velocity function  $v(t) = t^2 - t$ , where  $v$  is measured in meters per second. Find

(a) the displacement of the particle during the time interval  $[0, 5]$ .

**Question 5****1 pts**

A particle moves along a line with velocity function  $v(t) = t^2 - t$ , where  $v$  is measured in meters per second. Find **(b)** the distance traveled by the particle during the time interval  $[0, 5]$ .

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