

Lesson 5-5
THE FUNDAMENTAL THEOREM OF CALCULUS

Q1 Assume that

$$\int_2^4 f(x)dx = -5, \int_2^4 g(x)dx = 3$$

Find

$$\int_2^4 [4f(x) - 3g(x)] dx =$$

- a) 29
- b) -29
- c) 2
- d) 1

Q2 Assume that

$$f(x) = \begin{cases} 4x, & x \leq 2 \\ 1, & x > 2 \end{cases}$$

Find

$$\int_0^3 f(x)dx$$

- a) 6
- b) 9
- c) 16
- d) 21

Q3 Write the expression as a single integral.

$$\int_0^5 f(x)dx - \int_2^5 f(x)dx$$

- a) $\int_0^2 f(x)dx$
- b) $\int_2^5 f(x)dx$
- c) $\int_5^2 f(x)dx$
- d) $\int_0^5 f(x)dx$