Definite Integrals & the Fundamental Theorem · 1

Evaluate the definite integral $\int$ from 0 to 1 of $(4x + 5)\,dx$.

Definite Integrals & the Fundamental Theorem · 2

Evaluate the definite integral $\int$ from 0 to 1 of $(4x^2 + 5)\,dx$.

Definite Integrals & the Fundamental Theorem · 3

Evaluate the definite integral $\int$ from 4 to 1 of $(8x)\,dx$.

Definite Integrals & the Fundamental Theorem · 4

Evaluate the definite integral $\int$ from 0 to 3 of $(4x)\,dx$.

Definite Integrals & the Fundamental Theorem · 5

Given $\int$ from -1 to 4 of $f(x)\,dx = 5$, find $\int$ from -1 to 4 of $-2f(x)\,dx$.

Definite Integrals & the Fundamental Theorem · 6

Evaluate the definite integral $\int$ from 0 to 2 of $(3x^2 + 3)\,dx$.

Definite Integrals & the Fundamental Theorem · 7

Evaluate the definite integral $\int$ from 0 to 1 of $(3x^3)\,dx$.

Definite Integrals & the Fundamental Theorem · 8

Given $\int$ from 0 to 4 of $f(x)\,dx = -4$, find $\int$ from 0 to 4 of $-2f(x)\,dx$.

Definite Integrals & the Fundamental Theorem · 2

ANSWER

$$\frac{19}{3}$$

Definite Integrals & the Fundamental Theorem · 1

ANSWER

7

Definite Integrals & the Fundamental Theorem · 4

ANSWER

18

Definite Integrals & the Fundamental Theorem · 3

ANSWER

-60

Definite Integrals & the Fundamental Theorem · 6

ANSWER

14

Definite Integrals & the Fundamental Theorem · 5

ANSWER

-10

Definite Integrals & the Fundamental Theorem · 8

ANSWER

8

Definite Integrals & the Fundamental Theorem · 7

ANSWER

$$\frac{3}{4}$$

Definite Integrals & the Fundamental Theorem · 9

Evaluate the definite integral $\int$ from 0 to 1 of $(3x + 3)\,dx$.

Definite Integrals & the Fundamental Theorem · 10

Evaluate the definite integral $\int$ from 0 to 1 of $(4x^3 + 1)\,dx$.

Definite Integrals & the Fundamental Theorem · 11

Evaluate the definite integral $\int$ from 3 to 0 of $(8x)\,dx$.

Definite Integrals & the Fundamental Theorem · 12

Evaluate the definite integral $\int$ from 0 to 2 of $(3x^2)\,dx$.

Definite Integrals & the Fundamental Theorem · 13

Given $\int$ from 1 to 6 of $f(x)\,dx = 4$, find $\int$ from 6 to 1 of $f(x)\,dx$.

Definite Integrals & the Fundamental Theorem · 14

Evaluate the definite integral $\int$ from 0 to 3 of $(2x)\,dx$.

Definite Integrals & the Fundamental Theorem · 15

Evaluate the definite integral $\int$ from 2 to 0 of $(8x + 2)\,dx$.

Definite Integrals & the Fundamental Theorem · 16

Evaluate the definite integral $\int$ from 0 to 3 of $(4x^2 + 3)\,dx$.

Definite Integrals & the Fundamental Theorem · 10

ANSWER

2

Definite Integrals & the Fundamental Theorem · 9

ANSWER

$$\frac{9}{2}$$

Definite Integrals & the Fundamental Theorem · 12

ANSWER

8

Definite Integrals & the Fundamental Theorem · 11

ANSWER

-36

Definite Integrals & the Fundamental Theorem · 14

ANSWER

9

Definite Integrals & the Fundamental Theorem · 13

ANSWER

-4

Definite Integrals & the Fundamental Theorem · 16

ANSWER

45

Definite Integrals & the Fundamental Theorem · 15

ANSWER

-20

Evaluate the definite integral $\int$ from 1 to 3 of $(3x^2 + x + 6)$ dx.

Given $\int$ from 3 to 8 of f(x) dx = 8 and $\int$ from 3 to 8 of g(x) dx = -2, find $\int$ from 3 to 8 of (4f(x) + 3g(x)) dx.

Let F(x) = $\int$ from 1 to x of $(3t^2 + t)$ dt. Find F(1).

Evaluate the definite integral $\int$ from 1 to 4 of $(x^2 - 4x + 4)$ dx.

A particle moves along a line with velocity $v(t) = 2t^2 + 5t - 4$ meters per second. Find its displacement (in meters) from t = 1 to t = 2.

Given $\int$ from 1 to 4 of f(x) dx = 6 and $\int$ from 4 to 8 of f(x) dx = 6, find $\int$ from 1 to 8 of f(x) dx.

Evaluate the definite integral $\int$ from 0 to 1 of $(x^2 - x - 4)$ dx.

Let F(x) = $\int$ from 0 to x of $(t^2 + 3t - 1)$ dt. Find F'(-3).

Definite Integrals & the Fundamental Theorem · 18

ANSWER

26

Definite Integrals & the Fundamental Theorem · 17

ANSWER

42

Definite Integrals & the Fundamental Theorem · 20

ANSWER

3

Definite Integrals & the Fundamental Theorem · 19

ANSWER

0

Definite Integrals & the Fundamental Theorem · 22

ANSWER

12

Definite Integrals & the Fundamental Theorem · 21

ANSWER

$$\frac{49}{6}$$

Definite Integrals & the Fundamental Theorem · 24

ANSWER

-1

Definite Integrals & the Fundamental Theorem · 23

ANSWER

$$-\frac{25}{6}$$