Definite Integrals & the Fundamental Theorem · 1

Evaluate the definite integral $\int$ from 0 to 1 of $(3x^2 + x - 6)$ dx.

Definite Integrals & the Fundamental Theorem · 2

Given $\int$ from -1 to 5 of f(x) dx = 3, find $\int$ from -1 to 5 of 4f(x) dx.

Definite Integrals & the Fundamental Theorem · 3

Let $F(x) = \int$ from 2 to x of $(t^2 + 4t - 3)$ dt. Find F'(2).

Definite Integrals & the Fundamental Theorem · 4

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

Definite Integrals & the Fundamental Theorem · 5

A particle moves along a line with velocity $v(t) = 2t^2 + 4t - 5$ meters per second. Find its displacement (in meters) from t = 1 to t = 3.

Definite Integrals & the Fundamental Theorem · 6

Given $\int$ from 0 to 6 of f(x) dx = -2 and $\int$ from 0 to 4 of f(x) dx = 3, find $\int$ from 4 to 6 of f(x) dx.

Definite Integrals & the Fundamental Theorem · 7

Evaluate the definite integral $\int$ from 0 to 2 of $(2x^2 - 4x - 6)$ dx.

Definite Integrals & the Fundamental Theorem · 8

Evaluate the definite integral $\int$ from 1 to 4 of $(2x^2 - 5x - 3)$ dx.

Definite Integrals & the Fundamental Theorem · 2

ANSWER

$$12$$

Definite Integrals & the Fundamental Theorem · 1

ANSWER

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

Definite Integrals & the Fundamental Theorem · 4

ANSWER

$$\frac{159}{2}$$

Definite Integrals & the Fundamental Theorem · 3

ANSWER

$$9$$

Definite Integrals & the Fundamental Theorem · 6

ANSWER

$$-5$$

Definite Integrals & the Fundamental Theorem · 5

ANSWER

$$\frac{70}{3}$$

Definite Integrals & the Fundamental Theorem · 8

ANSWER

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

Definite Integrals & the Fundamental Theorem · 7

ANSWER

$$\frac{44}{-3}$$

Definite Integrals & the Fundamental Theorem · 9

Evaluate the definite integral $\int$ from 1 to 2 of $(-x^3 - 4x - 1)$ dx.

Definite Integrals & the Fundamental Theorem · 10

Let $F(x) = \int$ from 3 to x of $(-t^3 + 2t^2 - 4)$ dt. Find $F'(4)$.

Definite Integrals & the Fundamental Theorem · 11

Find the average value of $f(x) = x^3 - 5x^2 + 1$ on the interval $[0, 4]$.

Definite Integrals & the Fundamental Theorem · 12

Given $\int$ from 2 to 4 of f(x) dx = 9 and $\int$ from 4 to 8 of f(x) dx = 10, find $\int$ from 2 to 8 of f(x) dx.

Definite Integrals & the Fundamental Theorem · 13

Given $\int$ from 3 to 7 of f(x) dx = -7, find $\int$ from 3 to 7 of (f(x) + 1) dx.

Definite Integrals & the Fundamental Theorem · 14

A particle moves along a line with velocity $v(t) = -t^3 - 4t^2 + 3$ meters per second. Find its displacement (in meters) from t = 0 to t = 2.

Definite Integrals & the Fundamental Theorem · 15

Evaluate the definite integral $\int$ from 0 to 1 of $(-2x^3 + 5x^2 + 4)$ dx.

Definite Integrals & the Fundamental Theorem · 16

Let $F(x) = \int$ from 3 to x of $(t^3 + 4t)$ dt. Find $F'(4)$.

Definite Integrals & the Fundamental Theorem · 10

ANSWER

$$-36$$

Definite Integrals & the Fundamental Theorem · 9

ANSWER

$$\frac{43}{-4}$$

Definite Integrals & the Fundamental Theorem · 12

ANSWER

$$19$$

Definite Integrals & the Fundamental Theorem · 11

ANSWER

$$\frac{29}{-3}$$

Definite Integrals & the Fundamental Theorem · 14

ANSWER

$$\frac{26}{-3}$$

Definite Integrals & the Fundamental Theorem · 13

ANSWER

$$-3$$

Definite Integrals & the Fundamental Theorem · 16

ANSWER

$$80$$

Definite Integrals & the Fundamental Theorem · 15

ANSWER

$$\frac{31}{6}$$

Definite Integrals & the Fundamental Theorem · 17

Evaluate the definite integral $\int$ from -1 to 2 of $(x^3 + 4x^2 - 1)$ dx.

Definite Integrals & the Fundamental Theorem · 18

Let $F(x) = \int$ from 3 to x of $(3t^3 + 2t^2 - 5)$ dt. Find $F'(3)$.

Definite Integrals & the Fundamental Theorem · 19

Find the average value of $f(x) = -x^3 - x - 1$ on the interval $[1, 3]$.

Definite Integrals & the Fundamental Theorem · 20

Given $\int$ from 2 to 6 of $f(x)$ dx = 12 and $\int$ from 2 to 3 of $f(x)$ dx = 4, find $\int$ from 3 to 6 of $f(x)$ dx.

Definite Integrals & the Fundamental Theorem · 21

Given $\int$ from 2 to 4 of $f(x)$ dx = 6, find $\int$ from 4 to 2 of $f(x)$ dx.

Definite Integrals & the Fundamental Theorem · 22

A particle moves along a line with velocity $v(t) = 2t^3 - t + 1$ meters per second. Find its displacement (in meters) from t = 0 to t = 1.

Definite Integrals & the Fundamental Theorem · 23

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

Definite Integrals & the Fundamental Theorem · 24

Let $F(x) = \int$ from 0 to x of $(-t^3 - 3t^2 + 5)$ dt. Find $F'(3)$.

Definite Integrals & the Fundamental Theorem · 18

ANSWER

$$94$$

Definite Integrals & the Fundamental Theorem · 17

ANSWER

$$\frac{51}{4}$$

Definite Integrals & the Fundamental Theorem · 20

ANSWER

$$8$$

Definite Integrals & the Fundamental Theorem · 19

ANSWER

$$-13$$

Definite Integrals & the Fundamental Theorem · 22

ANSWER

$$1$$

Definite Integrals & the Fundamental Theorem · 21

ANSWER

$$-6$$

Definite Integrals & the Fundamental Theorem · 24

ANSWER

$$-49$$

Definite Integrals & the Fundamental Theorem · 23

ANSWER

$$\frac{15}{2}$$