Task card 1 Definite Integrals & the Fundament...

Evaluate the definite integral ∫ from 1 to 2 of (-2x³ - 3x² + 2) dx.

Task card 2 Definite Integrals & the Fundament...

Let G(x) = ∫ from 0 to 3x of (3t + 5) dt. Find G'(-2).

Task card 3 Definite Integrals & the Fundament...

Find the average value of f(x) = x³ - 2x² + 2 on the interval [0, 4].

Task card 4 Definite Integrals & the Fundament...

Evaluate the definite integral ∫ from 1 to 2 of (3x³ - 3x + 2) dx.

Task card 5 Definite Integrals & the Fundament...

Given ∫ from 3 to 5 of f(x) dx = 5, find ∫ from 5 to 3 of f(x) dx.

Task card 6 Definite Integrals & the Fundament...

Let G(x) = ∫ from 0 to 2x + 1 of (t - 3) dt. Find G'(2).

Task card 7 Definite Integrals & the Fundament...

Given $\int$ from 1 to 2 of f(x) dx = 7 and $\int$ from 2 to 3 of f(x) dx = 8, find $\int$ from 1 to 3 of f(x) dx.

Task card 8 Definite Integrals & the Fundament...

A particle moves along a line with velocity $v(t) = t^3 - 2t - 6$ meters per second. Find its displacement (in meters) from t = 1 to t = 2.

Task card 9 Definite Integrals & the Fundament...

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

Task card 10 Definite Integrals & the Fundament...

Let $G(x) = \int$ from 1 to x^3 of $(t - 5)\,dt$. Find $G'(-2)$.

Task card 11 Definite Integrals & the Fundament...

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

Task card 12 Definite Integrals & the Fundament...

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

Task card 13 Definite Integrals & the Fundament...

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

Task card 14 Definite Integrals & the Fundament...

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

Task card 15 Definite Integrals & the Fundament...

Given $\int$ from 0 to 3 of f(x) dx = 9 and $\int$ from 3 to 4 of f(x) dx = -5, find $\int$ from 0 to 4 of f(x) dx.

Task card 16 Definite Integrals & the Fundament...

A particle moves along a line with velocity $v(t) = -2t^3 - 5t^2 - 4$ meters per second. Find its displacement (in meters) from t = 0 to t = 2.

Task card 17 Definite Integrals & the Fundament...

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

Task card 18 Definite Integrals & the Fundament...

Let G(x) = $\int$ from 1 to $2x + 1$ of $(3t^2 + 5)$ dt. Find G'(1).

Task card 19 Definite Integrals & the Fundament...

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

Task card 20 Definite Integrals & the Fundament...

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

Task card 21 Definite Integrals & the Fundament...

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

Task card 22 Definite Integrals & the Fundament...

Let $G(x) = \int$ from 2 to x^2 of $(2t - 2)\,dt$. Find $G'(-2)$.

Task card 23 Definite Integrals & the Fundament...

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

Task card 24 Definite Integrals & the Fundament...

A particle moves along a line with velocity $v(t) = 2t^3 + 4t^2 + 3$ meters per second. Find its displacement (in meters) from $t = 0$ to $t = 1$.

Definite Integrals & the Fundamental Theorem Task Cards

Recording sheet · Grade 12 · Give each answer as an exact number: a whole number or a fraction in simplest form, like 14/3 or -5/2.

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Definite Integrals & the Fundamental Theorem Task Cards: Answer Key

Grade 12 · Hard

The answers online

1. $-\frac{25}{2}$	**2.** -39	**3.** $\frac{22}{3}$
4. $\frac{35}{4}$	**5.** -5	**6.** 4
7. 15	**8.** $-\frac{21}{4}$	**9.** $-\frac{93}{4}$
10. -156	**11.** $\frac{151}{3}$	**12.** $-\frac{1}{4}$
13. -4	**14.** 20	**15.** 4
16. $-\frac{88}{3}$	**17.** 42	**18.** 64
19. $\frac{23}{4}$	**20.** $-\frac{41}{12}$	**21.** -13
22. -24	**23.** 10	**24.** $\frac{29}{6}$