

do you know math(integrals)



Yes, I can definitely help with integrals! Whether you're dealing with definite or indefinite integrals, simple polynomials, trigonometric functions, or more complex expressions, feel free to share the problem you're working on, and I'll do my best to assist!

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is and complete the question(s) that follow(s):

open

get of our interest on the basis of a wide range of factors, including economic activity and the demand for goods. The price of South Africa can be calculated by a value.

$f(x) = (11.21 - \cos(\frac{x}{4})) \times 10^8$ lines per m.p.

name



To solve the integral problem $\int_2^n (4s + 1) ds = 30$, we need to evaluate the integral and solve for n .

1. Set up the integral:

$$\int_2^n (4s + 1) ds$$

2. Integrate $4s + 1$:

$$\int (4s + 1) ds = 2s^2 + s + C$$

3. Evaluate the definite integral from 2 to n :

$$[2s^2 + s]_2^n = (2n^2 + n) - (2(2)^2 + 2)$$

Simplifying, we get:



$$2n^2 + n - (8 + 2) = 2n^2 + n - 10$$

4. Set up the equation:

$$2n^2 + n - 10 = 30$$

$$2n^2 + n - 40 = 0$$

5. Solve the quadratic equation: Using the quadratic formula:

$$n = \frac{-1 \pm \sqrt{1 + 4 \cdot 2 \cdot 40}}{2 \cdot 2}$$

$$n = \frac{-1 \pm \sqrt{1 + 320}}{4}$$

$$n = \frac{-1 \pm \sqrt{321}}{4}$$

Calculating the result for n , we get two possible values, but only the positive solution is valid since $n > 0$. Let me calculate it.

The positive solution for n is approximately 4.23.

Thus, $n \approx 4.23$ satisfies the equation $\int_2^n (4s + 1) ds = 30$. [?]

it from -2 not 2



Thank you for clarifying! Let's redo the calculation with the correct limits of integration: -2 to n .

We need to solve:

$$\int_{-2}^n (4s + 1) ds = 30$$

1. Integrate $4s + 1$:

$$\int (4s + 1) ds = 2s^2 + s + C$$

2. Evaluate the definite integral from -2 to n :

$$[2s^2 + s]_{-2}^n = (2n^2 + n) - (2(-2)^2 + (-2))$$


Simplifying, we get:

$$2n^2 + n - (8 - 2) = 2n^2 + n - 6$$

3. Set up the equation:

$$2n^2 + n - 6 = 30$$

$$2n^2 + n - 36 = 0$$

4. Solve the quadratic equation: Using the dratic formula:

$$n = \frac{-1 \pm \sqrt{1 + 4 \cdot 2 \cdot 36}}{2 \cdot 2}$$

$$n = \frac{-1 \pm \sqrt{1 + 288}}{4}$$

$$n = \frac{-1 \pm \sqrt{289}}{4}$$

Let me calculate the value of n .

The correct solution for n is $n = 4$.

Thus, with the limits from -2 to n , $n = 4$ satisfies the equation $\int_{-2}^n (4s + 1) ds = 30$. [\[↩\]](#)

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