

Calculus Section 5.4 Part 1 Indefinite Integrals and Net Change Theorem

Lesson 299 | Calculus AB | Basic integration and net change

<https://www.youtube.com/watch?v=Sbz4HQQpUo8>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01 Find an antiderivative of $8 \cdot x^6 + 5$.

02 Find an antiderivative of $12 \cdot x^7 + 4$.

03 Find an antiderivative of $7 \cdot x^6 + 11$.

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Name: _____ Date: _____ Show your reasoning.

04

Find an antiderivative of $3 \cdot x^2 + 10$.

05

Find an antiderivative of $6 \cdot x^3 + 14$.

06

Find an antiderivative of $2 \cdot x^5 + 8$.

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01

Find an antiderivative of $8 \cdot x^6 + 5$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (8 \cdot x^6 + 35)/7 + C$. Differentiate to check.

02

Find an antiderivative of $12 \cdot x^7 + 4$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (3 \cdot x^7 + 8)/2 + C$. Differentiate to check.

03

Find an antiderivative of $7 \cdot x^6 + 11$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (x^6 + 11) + C$. Differentiate to check.

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04

Find an antiderivative of $3 \cdot x^2 + 10$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (x^2 + 10) + C$.
Differentiate to check.

05

Find an antiderivative of $6 \cdot x^3 + 14$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (3 \cdot x^3 + 28)/2 + C$.
Differentiate to check.

06

Find an antiderivative of $2 \cdot x^5 + 8$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (x^5 + 24)/3 + C$.
Differentiate to check.