

Calculus 5.4 Part II More Definite and Indefinite Integrals

Lesson 307 | Calculus AB | Basic integration and net change

<https://www.youtube.com/watch?v=3Mm8molZCRw>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01 Find an antiderivative of $14 \cdot x^2 + 2$.

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

03 Find an antiderivative of $5 \cdot x^3 + 3$.

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Name: _____ Date: _____ Show your reasoning.

04

Find an antiderivative of $6 \cdot x^6 + 2$.

05

Find an antiderivative of $7 \cdot x^6 + 3$.

06

Find an antiderivative of $11 \cdot x^5 + 9$.

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01 Find an antiderivative of $14 \cdot x^2 + 2$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $14 \cdot x^3/3 + 2 \cdot x + C$. Differentiate to check.

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

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (8 \cdot x^2 + 15)/3 + C$. Differentiate to check.

03 Find an antiderivative of $5 \cdot x^3 + 3$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (5 \cdot x^3 + 12)/4 + C$. Differentiate to check.

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04

Find an antiderivative of $6 \cdot x^6 + 2$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $6 \cdot x^{7/7} + 2 \cdot x + C$. Differentiate to check.

05

Find an antiderivative of $7 \cdot x^6 + 3$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (x^6 + 3) + C$. Differentiate to check.

06

Find an antiderivative of $11 \cdot x^5 + 9$.

Integrate each power using $\int x^p dx = x^{(p+1)}/(p+1)$. An antiderivative is $x \cdot (11 \cdot x^5 + 54)/6 + C$. Differentiate to check.