

## Calculus 3 1 Basic Derivatives Formulas

Lesson 269 | Calculus AB | Derivative definition and basic rules

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

Original practice aligned to the saved video title.

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Show your reasoning.

**01**

Differentiate  $f(x)=5\cdot x^7 + 11\cdot x - 14$  on the interior of its real domain.

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**02**

Differentiate  $f(x)=6\cdot x^5 + 5\cdot x - 8$  on the interior of its real domain.

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**03**

Differentiate  $f(x)=13\cdot x^4 + 10\cdot x - 5$  on the interior of its real domain.

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**04**

Differentiate  $f(x)=2\cdot x^7 + 12\cdot x - 5$  on the interior of its real domain.

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**05**

Differentiate  $f(x)=14\cdot x^3 + 3\cdot x - 12$  on the interior of its real domain.

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**06**

Differentiate  $f(x)=13\cdot x^3 + 11\cdot x - 12$  on the interior of its real domain.

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01

Differentiate  $f(x)=5\cdot x^7 + 11\cdot x - 14$  on the interior of its real domain.

Apply the power rule term by term.  $f'(x)=35\cdot x^6 + 11$ .

02

Differentiate  $f(x)=6\cdot x^5 + 5\cdot x - 8$  on the interior of its real domain.

Apply the power rule term by term.  $f'(x)=30\cdot x^4 + 5$ .

03

Differentiate  $f(x)=13\cdot x^4 + 10\cdot x - 5$  on the interior of its real domain.

Apply the power rule term by term.  $f'(x)=52\cdot x^3 + 10$ .

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04

Differentiate  $f(x)=2\cdot x^7 + 12\cdot x - 5$  on the interior of its real domain.

Apply the power rule term by term.  $f'(x)=14\cdot x^6 + 12$ .

05

Differentiate  $f(x)=14\cdot x^3 + 3\cdot x - 12$  on the interior of its real domain.

Apply the power rule term by term.  $f'(x)=42\cdot x^2 + 3$ .

06

Differentiate  $f(x)=13\cdot x^3 + 11\cdot x - 12$  on the interior of its real domain.

Apply the power rule term by term.  $f'(x)=39\cdot x^2 + 11$ .