



derivative

[Examples](#) [Random](#)

Assuming "derivative" refers to a computation | Use as a general topic or referring to a mathematical definition or a word instead

■ function to differentiate: $1/(3x^2+5x)$

Also include: differentiation variable

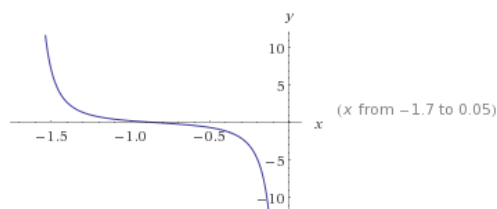
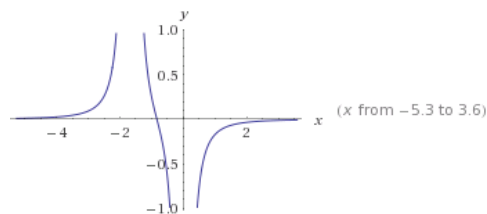
Derivative:

[Step-by-step solution](#)

$$\frac{d}{dx} \left(\frac{1}{3x^2 + 5x} \right) = \frac{-6x - 5}{x^2 (3x + 5)^2}$$

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Alternate forms:

$$-\frac{6x + 5}{x^2 (3x + 5)^2}$$

$$\frac{-6x - 5}{x^2 (x(9x + 30) + 25)}$$

Partial fraction expansion:

[Step-by-step solution](#)

$$\frac{9}{5(3x + 5)^2} - \frac{1}{5x^2}$$

Expanded forms:

$$\frac{-6x - 5}{9x^4 + 30x^3 + 25x^2}$$

$$-\frac{5}{(3x + 5)^2 x^2} - \frac{6}{(3x + 5)^2 x}$$

Root:

[Approximate form](#)[Step-by-step solution](#)

$$x = -\frac{5}{6}$$

Differential geometric curves:

(requires interactivity)

[Enable Interactivity](#)

Standard computation time exceeded...Try again with additional computation time »

Related Queries:

limit of $1/(3 x^2+5 x)$ as $x \rightarrow +\infty$

handwritten style continued fraction $1/(3 \dots$

series of $1/(3 x^2+5 x)$ at $x = 0$

$d/dx(1/(3 x^2+5 x))^{1/(3 x^2+5 x)}$