



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:  $(x^3 + 2)/x^{1/2}$

Also include: differentiation variable

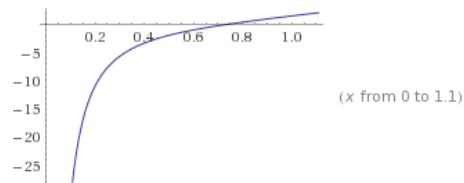
Derivative:

Step-by-step solution

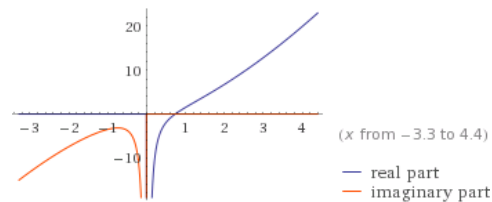
$$\frac{d}{dx} \left( \frac{x^3 + 2}{\sqrt{x}} \right) = \frac{5x^3 - 2}{2x^{3/2}}$$

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PLOTS:



Enable interactivity



Complex-valued plot ▼

Enable interactivity

Alternate form:

$$\frac{\frac{5x^3}{2} - 1}{x^{3/2}}$$

Expanded form:

$$\frac{5x^{3/2}}{2} - \frac{1}{x^{3/2}}$$

Differential geometric curves:

(requires interactivity)

Enable Interactivity

Related Queries:

=  $d^2/dx^2 ((x^3+2)/\sqrt{x})$ 

= keys used typing "derivative"

= series of  $(x^3+2)/\sqrt{x}$  at  $x = 0$ = curvature of  $(x^3+2)/\sqrt{x}$