
Feuille d'exercices « calculs de base » n° 1 Dérivées

Calculez les dérivées premières

$$f'(x) = \frac{df}{dx} \equiv \lim_{\epsilon \rightarrow 0} \frac{f(x + \epsilon) - f(x)}{\epsilon}$$

des fonctions $f(x)$ d'une seule variable suivantes :

$$f(x) = x^2 \tag{1}$$

$$f(x) = x^3 \tag{2}$$

$$f(x) = x^\alpha \tag{3}$$

$$f(x) = \frac{1}{x^\alpha} \tag{4}$$

$$f(x) = \ln x \tag{5}$$

$$f(x) = e^x \tag{6}$$

$$f(x) = \cos x \tag{7}$$

$$f(x) = \sin x \tag{8}$$

$$f(x) = \cosh x \tag{9}$$

$$f(x) = \sinh x \tag{10}$$

$$f(x) = \tan x \tag{11}$$

$$f(x) = \tanh x \tag{12}$$

$$f(x) = (1 - 3x^2)^4 \tag{13}$$

$$f(x) = x^2 - 5t + 2 \tag{14}$$

$$f(x) = \frac{1 - x}{\sin \alpha} \tag{15}$$

$$f(x) = \frac{x - 1}{(x + 1)^2} \tag{16}$$

$$f(x) = \frac{2x^3 + 3x^2 - 3}{x} \tag{17}$$

$$f(x) = \sqrt{x^2 - 5x + 2} \tag{18}$$

$$f(x) = \frac{1 - x}{\sqrt{x}} \tag{19}$$

$$f(x) = \sqrt{\frac{x - 1}{x + 1}} \tag{20}$$

$$f(x) = \frac{1}{\sqrt{x - 1}} \tag{21}$$