

$\text{deriv}(N * X, X, N) :- \text{number}(N), \text{var}(X).$

$\text{deriv}(X * N, X, N) :- \text{number}(N), \text{var}(X).$

$\text{deriv}(N * X, Y, B) :-$

$\text{number}(N), \text{var}(Y),$

$\text{deriv}(X, Y, C), B \text{ is } N * C.$

$\text{deriv}(X + Y, Z, C) :- \text{var}(Z),$

$\text{deriv}(X, Z, A), \text{deriv}(Y, Z, B)$

$C \text{ is } (A + B).$

$\text{deriv}(\exp(X), Y, B) :- \text{var}(Y),$

$\text{deriv}(X, Y, C)$

$B \text{ is } (\exp(X) * C).$

$\text{deriv}(\sin(X), Y, B) :- \text{var}(Y), \text{deriv}(X, Y, C)$

$B \text{ is } \cos(X) * C$

$\text{deriv}(\cos(X), Y, B) :- \text{var}(Y), \text{deriv}(X, Y, C)$

$B \text{ is } -\sin(X) * C$

$\text{deriv}(\ln(X), Y, B) :- \text{var}(Y), \text{deriv}(X, Y, C)$

$B \text{ is } (1 / X) * C$

$\text{deriv}(X / Y, Z, B) :- \text{var}(Z), \text{deriv}(X, Z, A),$

$\text{deriv}(Y, Z, C),$

$B \text{ is } ((A * Y) - (C * X)) / (Y * Y).$