# Integralrechnung pdf

If the derivative of f(x) is v(x), then the i of v(x) is f(x). Integrals with Trigonometric Functions Z sinaxdx=a cosax (63) Z sin2 axdx= xsin2ax 4a (64) Z sinn axdx=a cosax 2F;n 2;;cos2 ax (65) Z sin3 axdx= 3cosax 4a This chapter is about the idea of integration, and also about the technique of integ ration. Doing The algebra is well within the capability of a good computer algebra system like Sage, so we will present the result without all of the algebra; you can see how to do it in this Sage n +ax b ∫ (ax + b) dx. Integrals begin with sums. (n + 1) (fo r n ≠ − 1) ∫dx = ln ax + b ax + b a. We explain how it is done in principle, and then how it is done in practice. Integration is a problem of adding up infinitely many things, each of which is infinitesimally small. This chapter is about the idea of integration, and also about the technique of integration. ∫ x (ax + b) n a (n + 1) x − b n +dx = ax + b For functions, finding the integral is the reverse of h. We explain how it is done in principle, and then how it is done in practice. Integration is a Integralrechnung – Integralregeln Regel &' (' Konstantenregel)) ∗ Potenzregel * * +,-./lnExponentialregel IExponentialregel II ″″ ln ″ Logarithmusregel I ln ∗ ln We explain how it is done in principle, and then how it is done in practice. If none fits, try a different substitution The Idea of the Integral. This is the k of a triangle with base x and height lox. Integration is a problem of adding up infinitely many things, each of which is infinitesimally small. Doing the addition is not recommended Properties of the Integral: (1) Z b a f(x)dx = Z a b f(x)dx (2) Z a a f(x)dx =(3) Z b a kf(x)dx = k Z b a f(x)dx (4) Z b a [f(x)+g(x)]dx = Z b a f(x)dx+ Z b a g(x The triangle under v = lox out to x =has area I. It is approximated by four rectangles Guidelines for Integration by SubstitutionLet u be a function of x (usually part of the integrand)Solve for x and dx in terms of u and duConvert the entire integral to u-variable form and try to fit it to one or more of the basic integration formulas. If V(X) = lox then f(x) = i.

| Difficulté | Facile | Durée | 184 heure(s) |

| Catégories | Électronique, Mobilier, Bien-être & Santé, Musique & Sons, Recyclage & Upcycling | Coût | 266 EUR (€) |

# Sommaire

Étape 1 -

Commentaires

Matériaux                          Outils

# Étape 1 -