Cheatography

calculus exam 2 Cheat Sheet by chloeschmidt via cheatography.com/165721/cs/34693/

| Basic Properties | s/Formulas/Rules | Com |
|----------------------------------|---|------|
| (fg)' = f' g + f g' | | d/dx |
| $(f/g)' = (f' g - f g') / (g^2)$ | | |
| d/dx(f(g(x))) = f'(g(x))g'(x) | | |
| $d/dx(e^{g(x)}) = g'(x)e^{g(x)}$ | | |
| d/dx(lng(x)) = g'(x)/g(x) | | |
| $d/dx(x^n) = nx^{n-1}$ | | |
| d/dx(c) = 0, c is any constant | | |
| $b^{x} = e^{x \ln b}$ | | |
| Common Derivatives | | |
| Polynomials | d/dx(c) = 0 | |
| | d/dx(x) = 1 | |
| | d/dx(cx) = c | |
| | $d/dx(x^n) = nx^{n-1}$ | |
| | d/dx(cx ⁿ) = ncx ⁿ⁻¹ | |
| Trig Functions | d/dx(sinx) = cosx | |
| | d/dx(cosx) = - sinx | |
| | d/dx(tanx) = sec ² x | |
| | d/dx(secx) = secxtanx | |
| | d/dx(cscx) = - cscxcotx | |
| | d/dx(cotx) = - csc ² x | |
| Inverse Trig Functions | $\frac{d}{dx}(\sin^{-1}x) = \frac{1}{\sqrt{1-x^2}}$ | |
| | $d/dx(\cos^{-1}x) = -$ | |

Common Derivatives (cont)

 $/dx(cot^{-1}x) = -1/1+x^{2}$

By chloeschmidt

 $1/\sqrt{1-x^2}$ d/dx(tan⁻¹x) = 1/1+x²

 $d/dx(sec^{-1}x) = 1/|x|\sqrt{x^2-1}$ $d/dx(csc^{-1}x) = -1/|x|\sqrt{x^2-1}$

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