Proyecto Calculus Final

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Contents

1. $x = 0\ 2 * 0 - 2 = -2$
2. $x = 2\ 3 * 2^3 - 6 * 2 + 5 = 17$
3. $x = -4\ x^2 + 9x + \frac{20}{x+4} \to x + 5\ -4 + 5 = 1$
4.
5.
6.
7.
8. $\lim \frac{x^2+4x+5}{2x^4-7x}\ x \to \infty\ \frac{\lim x \to \infty (2-2/x)}{\lim x \to \infty (4+4/x)} = \frac{1}{2}$
9. $\lim \frac{x}{5}\ x \to \infty\ 1/5 * \infty\ \infty$
10. $12 * 7x^7 - 1\ 84x^6$
11. $4(-8x^-8 - 1)\ -32/x^9$
12. $d/dx^{x^{0.25}}\ 1/4x^{1/4} - 1\ 1/4x^{3/4}$
13. $d/dx(5/2x^3) + d/dx(sec(x))\ d/dx(5/2x^3) = -15/2x^4\ d/dx(sec(x)) - sec(x)tan(x)\ -15/2x^4 + sec(x)tan(x)$
14. $d/dx(3x^3-1)(2x+5) - d/dx(2x+5)(3x^3-1)/(2x+5)^2\ d/dx(3x^3-1) = 9x^2\ d/dx(2x+5) = 2\ 9x^2(2x+5) - 2(3x^3-1)/(2x+5)^2\ 12x^3 + 45x^2 + 2/(2x+5)^2$
15. $d/dx(sec(x))x^2 - d/x(x^2)sec(x)/(x^2)^2\ d/dx(sec(x)) = sec(x)tan(x)\ d/dx(x^2) = 2x\ sec(x)tan(x)x^2 - 2xsec(x)/(x^2)^2\ sec(x)(xtan(x)-2)/x^3$

16. $3d/dx(x^2sin(x))$ $3(d/dx(x^2)sin(x) + d/dx(sin(x))x^2)$ $d/dx(x^2) = 2x$ $d/dx(sin(x)) = cos(x)$ $3(2xsin(x) + cos(x)x^2$

1. $d/dx(8x^9)$ $8d/dx(x^9)$ $8 * 9^9 - 1$ $72x^8$

2. $cos(6x)d/dx(6x)$ $d/dx(6x) = 6$ $cos(6x) * 6$