TOP TEN DEGLI ERRORI

- $\log(x+1)^2 = 2\log(x+1)$

  invece che $2\log|x+1|$

- $\max_{x\in[0,1]} |\omega(x)|$: calcolo degli zeri di $\omega'(x)$ SENZA confronto con $\omega(0)$ e $\omega(1)$.

- C.E. di $y=\log(x+1)^2$

  $x>0 \; \ldots\ldots \; x+1>0 \; \ldots\ldots \; \forall x \ldots\ldots$

- $\int_0^1 x\,dx = x^2\Big|_0^1 \qquad \int_0^1 x^2 dx = x^3\Big|_0^1 \qquad \int_0^1 x^3 dx = x^4\Big|_0^1$

- $f(x) = \log(x+1)^2$

  $f'(x) = \dfrac{2\log(x+1)}{x+1}$ o $f'(x) = 2\,\dfrac{x+1}{x+1} = 2$ costante!!!

- $f(x) = 2\log|x+1| \Rightarrow f'(x) = \dfrac{2}{|x+1|}$ C.E. $\mathbb{R}$

- $f(x) = e^{-x}\cos x$

  $f'(x) = e^{-x}\operatorname{sen} x$ ovvero $(fg)' = f'g'$

  $f''(x) = -e^{-x}\cos x$

- $\left|\dfrac{2x}{x+1}\cdot\dfrac{1}{\log(x+1)^2}\right| < 10$

  $\left|\dfrac{2x}{x+1}\cdot\dfrac{1}{\log(x+1)^2} - 10\right| < 0$

TOP TEN DEGLI ERRORI ..... CONTINUA

- $\max\limits_{x\in[0,2\pi]} \left| \frac{2\,\mathrm{sen}\,x}{e^x} \right| = \frac{2}{e^{\pi/2}}$

- $|f(x) - S_1(x)| < -\frac{h^2}{4} \max\limits_{t\in\ldots} |f''(t)|$
- $|\phi(x) - p_2(x)| \leq -\frac{9}{2}\pi^2$
- $p_2(x) = -32x^2 + 20x = -16x^2 + 10x = -8x^2 + 5x$

  $p_3(x) = 64x^3 - 96x^2 + 32x = 2x^3 - 3x^2 + x$
- $\int_0^1 \left(\frac{16}{3}x^2 - \frac{16}{3}x + 1\right) dx = \frac{32}{3}x - \frac{16}{3}\Big|_0^1 = \ldots$

  $\int_0^1 (-8x^2 + 6x)\, dx = -16x + 6\Big|_0^1 = \ldots$

  $\int_0^1 \left(\frac{8}{3}x^2 - \frac{2}{3}x\right) dx = \frac{16}{3}x - \frac{2}{3}\Big|_0^1 = \ldots$

- $\frac{x}{(x+1)\log(x+1)} < 10 \qquad \begin{cases} x < 10(x+1)\log(x+1) \\ x > -10(x+1)\log(x+1) \end{cases}$
- se $|x| < 3 \qquad \left|\frac{x}{x+1}\right| < 1$

- grado di precisione delle formule di quadratura a 3 nodi : zero o minore di zero.

- $\max\limits_{[0,1]} |\phi(x) - p_2(x)| = \max |\underbrace{3\sin(2\pi x)}_{\leq 3} \underbrace{-20x}_{\leq 0} + \underbrace{32x^2}_{\leq 32}| \leq 35$