Derivate

29 novembre 2002

1. Calcolare la derivata (dove esiste) delle seguenti funzioni

$$f(x) = \begin{cases} e^x & \text{se } x \geq 0 \\ x^2 + x + 1 & \text{se } x < 0 \end{cases}$$

$$f(x) = \begin{cases} \cos(x) & \text{se } x > 0 \\ x^2 & \text{se } x \leq 0 \end{cases}$$

$$f(x) = \begin{cases} \frac{\sin^3(x)}{x} & \text{se } x > 0 \\ x^2 & \text{se } x \leq 0 \end{cases}$$

$$f(x) = \begin{cases} \frac{\sin^2(x)}{x} & \text{se } x > 0 \\ 0 & \text{se } x \leq 0 \end{cases}$$

$$f(x) = \begin{cases} x^2 \sin \frac{1}{x} & \text{se } x \neq 0 \\ 0 & \text{se } x = 0 \end{cases}$$

$$f(x) = \begin{cases} x & \text{se } x \neq 0 \text{ e } \sin \frac{1}{x} \geq 0 \\ \sin(x) & \text{se } x \neq 0 \text{ e } \sin \frac{1}{x} < 0 \\ 0 & \text{se } x = 0 \end{cases}$$