LIMITI NOTEVOLI

$$\lim_{x\to 0}\frac{sen\ x}{x}=1$$

dim. geometrica p.1426

$$\lim_{x\to 0}\frac{1-cos\ x}{x}=0$$

$$\lim_{x\to 0}\frac{1-cos\ x}{x}\cdot\frac{1+cos\ x}{1+cos\ x}=....$$

$$\lim_{x\to 0}\frac{1-cos\ x}{x^2}=\frac{1}{2}$$

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$$\lim_{x\to\pm\infty}\left(1+\frac{1}{x}\right)^x=e$$

definizione,

in generale si ha:

$$\lim_{x\to\pm\infty}\left(1+\frac{a}{x}\right)^{b\cdot x}=e^{a\cdot b}$$

$$\lim_{x\to 0}\frac{ln(1+x)}{x}=1$$

$$sost.:\quad t=\frac{1}{x}$$

$$\lim_{x\to 0}\frac{log_a(1+x)}{x}=log_a e\qquad (se\ a>0)$$

$$\lim_{x\to 0}\frac{e^x-1}{x}=1$$

$$sost.:\quad t=e^x-1$$

$$\lim_{x\to 0}\frac{a^x-1}{x}=ln\ a\qquad (se\ a>0)$$

$$\lim_{x\to 0}\frac{(1+x)^k-1}{x}=k$$

$$\lim_{x\to 0}\frac{e^{k\cdot ln(1+x)}-1}{x}\cdot\frac{k\cdot ln(1+x)}{k\cdot ln(1+x)}=....$$