Calcolare i seguenti limiti:

$$\lim_{x\to 0} \frac{\mathrm{tg}(e^x - 1)}{e^x - 1} = 1$$

$$\lim_{x\to 0} \frac{(1 + \mathrm{arctg}x)^7 - 1}{\log(1 + \mathrm{sen}x)} = 7$$

$$\lim_{x\to 0} \frac{(1 + \mathrm{sen}x)^5 - 1}{\log(1 + 3x)} = \frac{5}{3}$$

$$\lim_{x\to 0} \frac{4^{\mathrm{arctg}x} - 1}{\mathrm{arctg}x} = \log 4$$

$$\lim_{x\to 0} \frac{(1 + \mathrm{sen}x)^6 - 1}{\mathrm{tg}(2x)} = 3$$

$$\lim_{x\to 0} \frac{e^{\mathrm{tg}x} - 1}{\mathrm{sen}(2x)} = \frac{1}{2}$$

$$\lim_{x\to 0} \frac{\mathrm{tg}(8x)}{\log(1 + 3x)} = \frac{8}{3}$$

$$\lim_{x\to +\infty} \frac{\mathrm{sen}(e^{-x})}{e^{-x}} = 1$$

$$\lim_{x\to 0} \frac{(1 + \mathrm{tg}x)^5 - 1}{\mathrm{sen}x} = 5$$

$$\lim_{x\to 0} \frac{\log(1 + \mathrm{tg}x)}{\mathrm{tg}x} = 1$$

$$\lim_{x\to 0} \frac{(5^x - 1)^2}{1 - \cos x} = 2\log^2 5$$

$$\lim_{x\to 0} \frac{1 - \cos(\log(1 + x))}{\mathrm{tg}^2 x} = \frac{1}{2}$$

$$\lim_{x\to 0} \frac{(1 + 4x)^3 - 1}{\mathrm{arctg}(2x)} = 6$$

$$\lim_{x\to 1} \frac{1 - \cos(\log x)}{\log^2 x} = \frac{1}{2}$$

$$\lim_{x\to 0} \frac{(1 + \mathrm{arcsen}x)^3 - 1}{e^x - 1} = 3$$

$$\lim_{x\to 0} \frac{\mathrm{sen}(4x)}{\mathrm{arcsen}(3x)} = \frac{4}{3}$$

$$\lim_{x\to\frac{\pi}{2}} \frac{3^{\cos x}-1}{\cos x} = \log 3$$

$$\lim_{x\to 0} \frac{8^{\mathrm{sen}x}-1}{\log(1+x)} = \log 8$$

$$\lim_{x\to 0} \frac{1-\cos(2x)}{\mathrm{tg}^2 x} = 2$$

$$\lim_{x\to 0} \frac{\mathrm{arctg}(1-\cos x)}{1-\cos x} = 1$$

$$\lim_{x\to -\infty} \frac{\mathrm{tg}(e^x)}{e^x} = 1$$

$$\lim_{x\to 0} \frac{2^{3x}-1}{6x} = \frac{\log 2}{2}$$

$$\lim_{x\to +\infty} \frac{(1+e^{-x})^3-1}{e^{-x}} = 3$$

$$\lim_{x\to 0} \frac{e^{\mathrm{arcsen}x}-1}{(1+5x)^4-1} = \frac{1}{20}$$

$$\lim_{x\to 0} \frac{\mathrm{arctg}(6x)}{\mathrm{arcsen}(3x)} = 2$$

$$\lim_{x\to 0} \frac{1-\cos(\sqrt{x})}{x} = \frac{1}{2}$$

$$\lim_{x\to 0} \frac{(1+\mathrm{arctg}x)^5-1}{e^{5x}-1} = 1$$

$$\lim_{x\to 0} \frac{1-\cos(3x)}{\mathrm{sen}^2(6x)} = \frac{1}{8}$$

$$\lim_{x\to 1} \frac{(1+\log x)^4-1}{\log x} = 4$$

$$\lim_{x\to 0} \frac{5^{\mathrm{sen}x}-1}{\mathrm{tg}x} = \log 5$$

$$\lim_{x\to 0} \frac{3^{\mathrm{tg}x}-1}{\mathrm{arctg}(6x)} = \frac{\log 3}{6}$$

$$\lim_{x\to -\infty} \frac{(1+e^x)^3-1}{3e^x} = 1$$

$$\lim_{x\to 0} \frac{e^{2x}-1}{(1+3x)^8-1} = \frac{1}{12}$$