1. Ej 1

a. prepara

$$\tan(x) = \frac{x}{x-1}$$

$$\tan(x) - \frac{x}{x-1} = 0$$

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f(x) = tan(x) - x/(x-1)
```
??

$$\frac{\sin x}{\cos x} = \frac{x}{x-1}$$

$$\sin(x)(x-1) = \cos x$$

$$\sin(x)(x-1) - \cos x = 0$$

```
f(x) = sin(x) * (x-1)- cos(x)
```
?? ?? ??

b.

```
a = -0.6
b = -0.5
a0 = a
b0 = b
c0 = (a0+b0)/2

a1 = a0
b1 = c0
c1 = (a1+b1)/2

a2 = c1
b2 = b1
c2 = (a2+b2)/2

a3 = a2
b3 = c2
c3 = (a3+b3)/2
```

$$c_0 = ??$$
$$f(a_0), f(c_0), f(b_0) = ??, ??, ??$$
$$c_1 = ??$$
$$f(a_1), f(c_1), f(b_1) = ??, ??, ??$$
$$c_2 = ??$$
$$f(a_2), f(c_2), f(b_2) = ??, ??, ??$$
$$c_3 = ??$$
$$f(a_3), f(c_3), f(b_3) = ??, ??, ??$$

c.
Cota de error

$$N > \frac{\log(\frac{b-a}{\varepsilon})}{\log 2} - 1$$

1

```
epsilon = 10^-8
cota = numerical_approx((log((b-a)/epsilon)/log(2)) - 1)
```

$$N = \textbf{??}$$

$$N = \textbf{??}$$
$$c_N = \textbf{??}$$