

$$\Delta_n \in (l - \varepsilon, l + \varepsilon)$$

$$\Delta_n > l - \varepsilon$$

$$\Delta_n < l + \varepsilon$$

$$\Delta_n > a$$

$$\Delta_n < a$$

$$\Delta_n = g^n$$

$$g \in (-1, 1)$$

$$l = 0$$

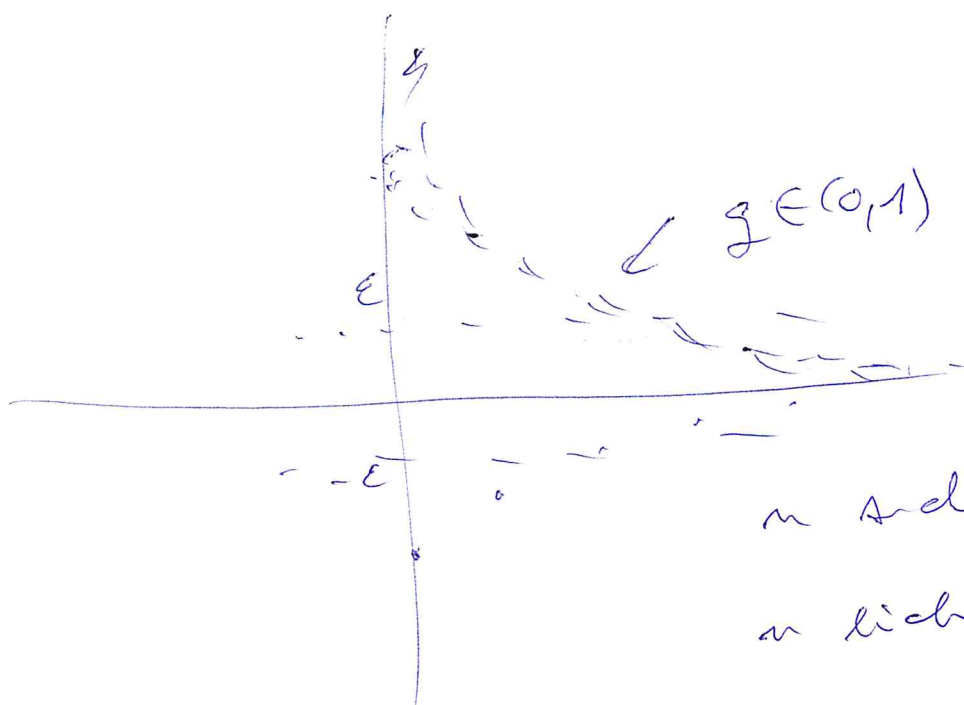
$$g^n > 0 - \varepsilon$$

$$g^n < 0 + \varepsilon$$

$$g \in (0, 1)$$

~~$$g \in g = 0$$~~

$$g \in (-1, 0)$$



$$n \text{ pairé} - g^n = (-g)^n$$

$$n \text{ impair} \begin{cases} g^n > -\varepsilon \\ g^n < +\varepsilon \end{cases}$$

$$-g^m < \varepsilon$$

$$-g^m > -\varepsilon$$

$$(-g)^m < \varepsilon$$

$$(-g)^m > -\varepsilon$$

16.

$$\int_0^1 \frac{1}{2x^2 + \sqrt{3+x^2}} dx$$

$$\frac{1}{k^2 + 3k} = \frac{1/3}{k} - \frac{1/3}{k+3}$$

$$\frac{1/3(k+3) - 1/3k}{k(k+3)}$$

$$\Delta_n = \left[\frac{1/3}{1} - \frac{1/3}{4} \right] + \left[\frac{1/3}{2} - \frac{1/3}{5} \right] + \left[\frac{1/3}{3} - \frac{1/3}{6} \right] + \frac{1/3}{4} - \frac{1/3}{7} + \frac{1/3}{5} - \frac{1/3}{8}$$

$$\left(\frac{1/3}{1} + \frac{1/3}{2} + \frac{1/3}{3} - \frac{1/3}{n+1} - \frac{1/3}{n+2} - \frac{1/3}{n+3} \right)$$

$$1/3 \left(\frac{3+3+2}{6} \right) = \frac{11}{18}$$

→ 0

$$f(x) = (x^2 + x + 1) \exp(x)$$

$$f'(x) = (2x + 1) \exp(x) + (x^2 + x + 1) \exp(x) =$$

$$= (x^2 + 3x + 2) \exp(x)$$

$$x^2 + 3x + 2 = 0$$

$$x_1 = -1$$

$$x_2 = -2$$

$$e^{x+iy} = e^x (\cos(y) + i \sin(y))$$

~~2~~

$$y = \pi$$



$$-1 + i0$$

$$e^{x+i\pi} = -e^x$$

$$\sum_{k=1}^{\infty} \frac{1}{k^{3/2}}$$

$$\int_1^{\infty} \frac{1}{x^{3/2}} dx = 2$$

$$\sum_{k=2}^{\infty} a_2 + a_3 + \dots$$

$$< 2 + a_1$$

$$a_1 + \dots$$

$$< 3$$