

$$x^T a x + b \xrightarrow{x \rightarrow 1} (x-1)^T = m^T - \varepsilon m + \varepsilon$$

$$\begin{aligned} a &= -\varepsilon \\ b &= \varepsilon \end{aligned} \quad a+b=0$$

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$$x^T a x + b \xrightarrow{x \rightarrow \sqrt{\varepsilon}} (x-\sqrt{\varepsilon})^T = m^T - \sqrt{\varepsilon} m + \sqrt{\varepsilon}$$

$$\begin{aligned} b &= \sqrt{\varepsilon} \\ a &= -\sqrt{\varepsilon} \end{aligned} \quad \begin{bmatrix} b \\ a \end{bmatrix} = \begin{bmatrix} \sqrt{\varepsilon} \\ -\sqrt{\varepsilon} \end{bmatrix} = -1$$

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$$\left(\frac{\sqrt{\lambda}}{\varepsilon} x + \frac{1}{\varepsilon} + a \right) + a \rightarrow a = -\frac{1}{\varepsilon} \quad [a] = -1$$

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$$\frac{1/2 \times \frac{1}{\varepsilon} \begin{bmatrix} -1 \\ -1/\varepsilon \end{bmatrix}}{1/2 \times \frac{1}{\varepsilon} \begin{bmatrix} 1 \\ -1/\varepsilon \end{bmatrix}} = \frac{-1 + 1/\varepsilon}{-1/\varepsilon + 1/\varepsilon} = \frac{1}{0^+} = +\infty$$

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$$\frac{m^T - \varepsilon}{m^T - \lambda} \xrightarrow{\text{HOP}} \frac{r_m}{c_m^T} \xrightarrow{x \rightarrow 1} \frac{1}{\mu}$$

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$$\frac{x^T + (1-x+1)s}{(1+s)\sqrt{m}} \xrightarrow[k \rightarrow 0]{x \rightarrow -1} \frac{x+1}{\sqrt{x}} = \frac{-1}{\frac{1}{x}} = -\widehat{(1)}$$

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$$\frac{\sqrt{1+x} - \sqrt{1-x}}{\sqrt{1 - (1 - \frac{x^2}{4})}} \times \frac{\sqrt{1+x} + \sqrt{1-x}}{\sqrt{1+x} + \sqrt{1-x}} = \frac{2x\sqrt{1}}{2\sqrt{1-x^2}} = -\widehat{(1)}$$

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$$\frac{k + \cos(1)}{0} \quad k+1=0 \rightarrow k=-1$$

$$\frac{-1 + \cos(\sqrt{a}n)}{-a^n} = \frac{-1 + 1 - \frac{a^n}{1}}{-a^n} = \frac{a}{1} = a \rightarrow a=9$$

$$\frac{a}{k} = \frac{9}{-1} = -9$$

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$$\frac{x\sqrt{x-a} + x(\sqrt{x} - \sqrt{a})}{\sqrt{x^2 - a^2}} = \frac{x}{\sqrt{x+a}} + \frac{x(\sqrt{x} - \sqrt{a})}{\sqrt{x^2 - a^2}}$$

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$$\lim_{n \rightarrow (-1)} \frac{1-k[n]}{n^2-1} \rightarrow -\infty \rightarrow \frac{1+k}{0} = -\infty \quad |k| > 1$$

$$\frac{1+k}{0} = -\infty \quad |k| < 1$$

$$\frac{1+k}{0} = -\infty \quad |k| < 1$$

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