Cor. X, Y $\quad X \perp Y, \ |X| = 1 = |Y|$

$$K(X,Y) - \bar{K}(X,Y) = g(\alpha(X,X), \alpha(Y,Y)) - |\alpha(X,Y)|^2$$

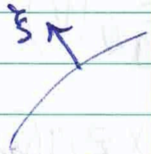
Cor If $\bar{M}$ has constant sectional curvature K, then

$$R(X,Y)Z = K\big(g(Y,Z)X - g(X,Z)Y\big) - \alpha(X,Y)Z$$

If $\bar{M} = \mathbb{R}^{n+k}$ with flat metric, then

$$R(X,Y) = -\alpha(X,Y)$$

Ex. $M^n \subset \mathbb{R}^{n+1}$. $\quad A_\xi x_i = \lambda_i x_i$. $\quad x_i$ o.n.



$|\xi| = 1$.

$$R(x_i, x_j)x_k = g(Ax_j, x_k)Ax_i - g(Ax_i, x_k)Ax_j$$
$$= \lambda_i\lambda_j \delta_{jk} x_i - \lambda_i\lambda_j \delta_{ik} x_j$$
$$= \begin{cases} 0 & k \neq i,j \\ -\lambda_i\lambda_j x_j & k = i \\ \lambda_i\lambda_j x_i & k = j \end{cases}$$

$$\therefore R(x_i, x_j) \longrightarrow \begin{array}{c|cc} & i & j \\ \hline i & & \lambda_i\lambda_j \\ j & -\lambda_i\lambda_j & \end{array}$$