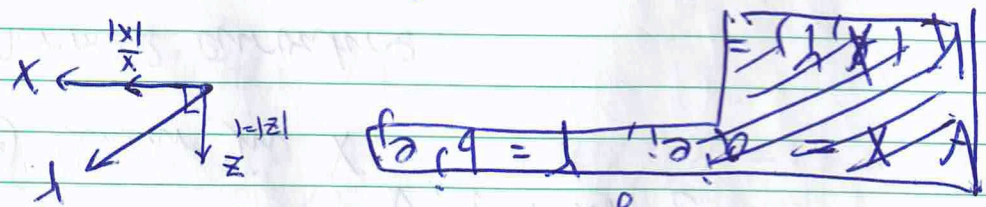


$(S^n, \text{can}) \quad \Gamma = -\text{id}$
 Recall $A_n = -d\Gamma$
 $\Rightarrow \lambda_1 = \dots = \lambda_n = 1$

Then $K(x, e_j) = 1, \quad i \neq j$



Note every vector $\neq 0$ in $T_x S^n$ is an eigen vector with eig. value 1

and set curvature is just Γ of choice of vectors spanning the same 2-dim plane.

So, $K(x, Y) = K\left(\frac{Y}{|Y|}, Z\right) = 1$

\therefore all sect. curv. of $S^n = 1$.

Normal connection & normal curvature
 Recall $(\nabla_x^Y)^T = -A_Y(X)$

$\nabla_x^Y Z = (\nabla_x^Y)^T Z = \nabla_x^Y Z + A_Y(X)$

\downarrow normal connection of the immersion