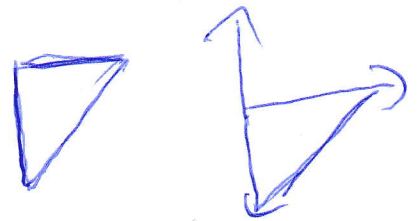


var =



$$\begin{pmatrix} 1 & \pi \rho_d(y_d, w_d) \\ \pi \rho_d(y_d, w_d) & 1 \end{pmatrix}$$

$$- \begin{pmatrix} \pi \rho_d(x_d, y_d) \\ \pi \rho_d(x_d, w_d) \end{pmatrix} \begin{pmatrix} \pi \rho_d(x_d, y_d) & \pi \rho_d(x_d, w_d) \end{pmatrix}$$



so diagonal terms:

$$\pi \rho_d(y_d, w_d) - \pi \left(\rho_d(x_d, y_d) \pi \rho_d(x_d, w_d) \right)$$

= 0 ??

= ρ^2

by symmetry

as most of x, y are the same
as only one of x, y are different $\rho_d(x_d, x_d) = 1$

$\rho(y, w)$

$$= \rho \|y - w\|^2 = \rho (\sqrt{2})^2 = \rho^2$$

& cancels to give zero!