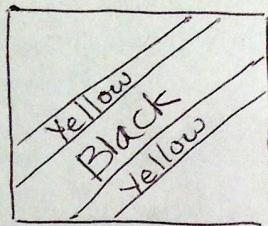
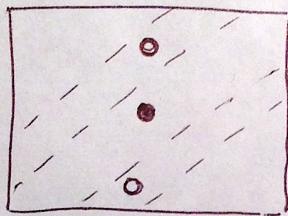


(1a) Consider the Tanzanian flag  $\rightarrow$  2 colors that cannot be linearly separated are Black (-1) & Yellow (+1). There are two yellow zones.



If 2 points are selected from yellow region (ie one from each band) and one from the Black region, like this:



then there exists no straight line that separates the black point ● from the yellow points ○.

A linear function of the form  $y=mx+b$  cannot assign a positive value to the yellow points and a negative value to the black point, since the 3 points are colinear & sign can only change once for a linear function.