In terms of data the decision rule is to assign to population c_1 if

$$(\bar{\mathbf{x}}_1 - \bar{\mathbf{x}}_2)^{\mathrm{T}} S_p^{-1} \bar{\mathbf{x}}_0 > \tfrac{1}{2}(\bar{\mathbf{x}}_1 - \bar{\mathbf{x}}_2)^{\mathrm{T}} S_p^{-1} (\bar{\mathbf{x}}_1 + \bar{\mathbf{x}}_2) \tag{7.27}$$

else assign to c_2. You can see that this is just Bayes' rule with equal priors. *When Bayes' linear rule holds, Fisher's method gives identical results.* When the Bayes