Text, letter

Description automatically generated

Text

Description automatically generated with low confidence

1. Find the equation for the LDA boundary between Y = +1 and Y = +2.
2. Find the equation for the LDA boundary between Y = +1 and Y = +3.
3. Find the equation for the LDA boundary between Y = +2 and Y = +3.
4. Make a plot with x1 along horizontal axis, x2 along vertical axis and draw each of the LDA boundaries you found. For each region, write the class label (e.g. “+2”) that would be chosen for a new sample that appeared in that region.
5. If you wanted to use Naive Bayes in addition to LDA (thus still assuming Gaussianity) for this problem, explain what would change (if anything).