Finally we ran our program with $\nu = 0.98$, see Figure 54.19. We have $p_f = 28, q_f = 30, p_m = 29$ and $q_m = 30$.

Because the term $(1/2)b^2$ is added to the objective function to be minimized, it turns out that (SVM_{s3}) yields values of b and η that are smaller than the values returned by ($\mathrm{SVM}_{s2'}$). This is the reason why a smaller margin width could be obtained for $\nu = 0.365$. On the other hand, (SVM_{s3}) is unable to achieve as big a margin as ($\mathrm{SVM}_{s2'}$) for values of $\nu \geq 0.97$, because the separating line produced by (SVM_{s3}) is lower than the the separating line produced by ($\mathrm{SVM}_{s2'}$).

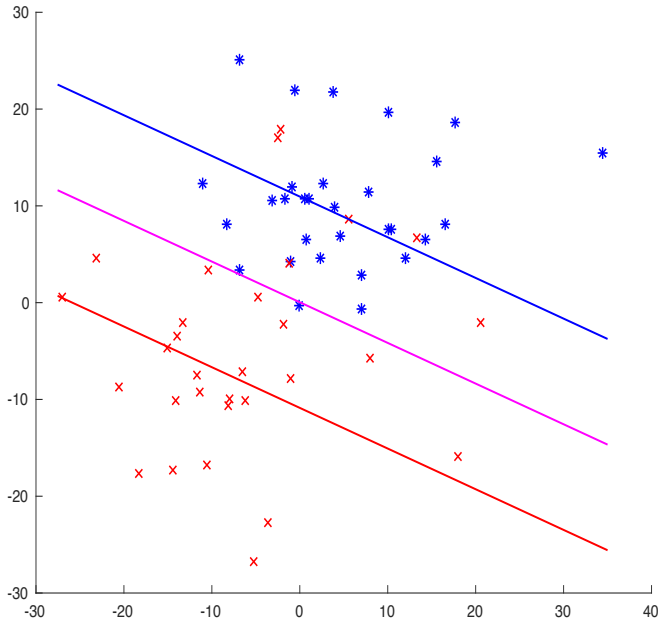

Figure 54.17: Running (SVM_{s3}) on two sets of 30 points; $\nu = 0.5$.