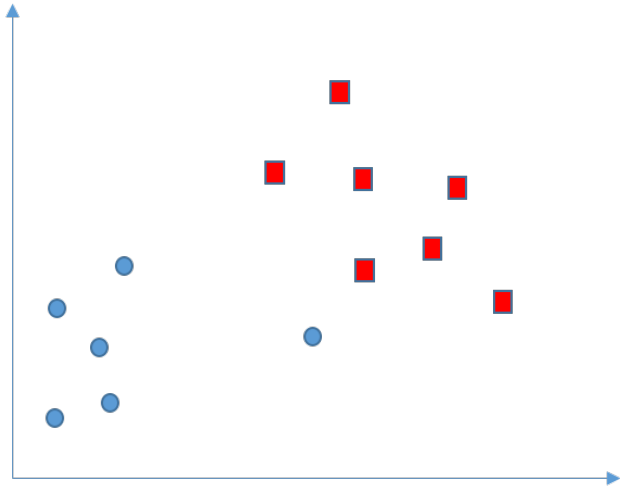
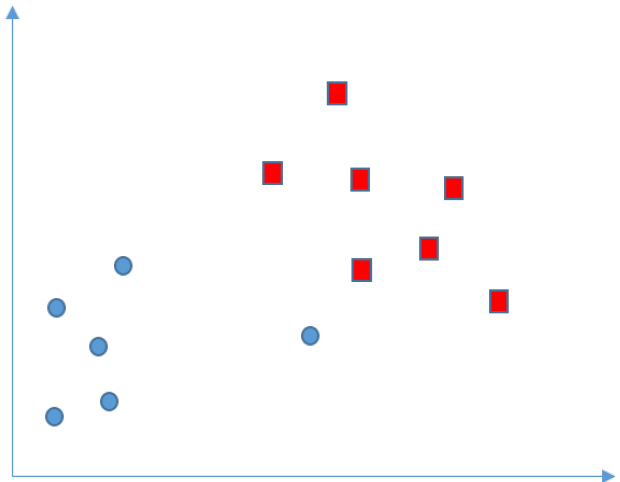


Name \_\_\_\_\_

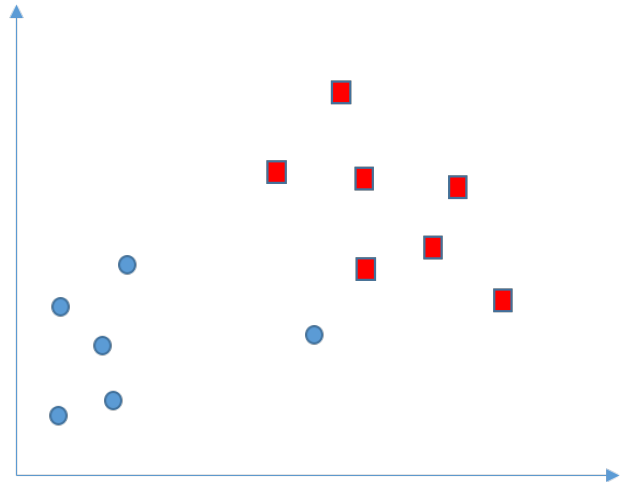
1. Draw a hyperplane (including the margin lines) generated by a linear hard-margin SVM. Circle the support vectors.



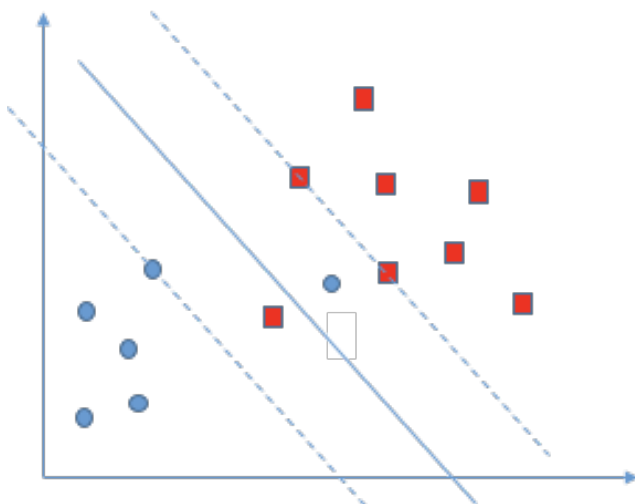
2. Draw a hyperplane (including the margin lines) generated by a linear soft-margin SVM with a large value of  $C$  (i.e.  $C \rightarrow \infty$ ).



3. Draw a hyperplane (including the margin lines) generated by a linear soft-margin SVM with a small value of  $C$  (i.e.  $C \rightarrow 0$ ).



4. Draw a circle-class data point with slack  $1 < \xi < 2$



5. In a soft-margin SVM, which datapoints would be the support vectors? Circle the support vectors here:

