A simple SVM exercise

Consider the following dataset, where X_1 and X_2 are the features and y the label:

Observation	X_1	X_2	y
1	6	9,5	-1
2	0,8	9,2	-1
3	1,8	6,5	-1
4	4,5	6,5	-1
5	7	5,5	1
6	4,5	4	1
7	9	3	1
8	2,5	1,5	1
9	5,5	0,5	1

1. Plot these points on a graph, using X_1 as the x-axis and X_2 as the y-axis, with a different color for each class.

2. We want to build a linear SVM classifier based on these data. Circle the examples that act as support vectors and give the equation of the separating line that maximizes the margin. To which class will this algorithm assign a new example with $X_1 = 6$ and $X_2 = 0,45$?