Q1.

Q2.

**2.1**

C = 10000, pred = 0.8624

C = 1000, pred = 0.8623

C = 100, pred = 0.8639

C = 10, Pred = 0.8639

C = 1, pred = 0.8639

C = 0.1 pred = 0.8639

C = 0.01 pred = 0.8379

C = 0.0001 pred = 0.5474

Equation of classifier

-0.08158492 -0.0010065348\*X1 -0.0011729048\*X2 -0.0016261967\*X3 + 0.0030064203\*X8+ 1.0049405641\*X9 -0.0028259432\*X10 + 0.0002600295\*X11 -0.0005349551\*X12 -0.0012283758\*X14 + 0.106363399\*X15 = 0

**2.2**

**Abfdot, better accuracy**

2.3

K = 10, accuracy = 0.924

Question 3.