Let the discriminate function

(1a)

, where

In the case of l = 2 and assume that

,n the case of l = 2 and

Then (1a) becomes

(1b)

We have

, then

(2)

The decision curve corresponding to and

, is

(3)

**Example 1:** Determine the decision curve for

, , ,

We have

, or

(5)

The curve corresponding to equation (5) is an ellipse as shown below.