The NIPALS algorithm based on Section 2.3, we can write the three matrix elements in the vector form, respectively is,andwhen the latent variable is 2.

 

 

 

At the time of iteration to the second step, using Eq. (1.20) and Eq. (1.21) intogives;

 

Expand Eq. (1.23) and use, into it, we will obtain;

 

Becauseis a column vector, sois a constant variable, we set, joint Eq. (1.22) to obtain;

 