Set-sequential Trees Problems

1. Show that the path of 4-vertices does not have a required labeling with the seven nonzero, 3-dimensional 01-vectors.

2. Show that the star $K_{1,2^{k}-1}$ (of 2^{k} vertices) has a required labeling with the nonzero, (k + 1)-dimensional 01-vectors.

3. Take a tree T of 8 vertices such that the degrees of the vertices are 4,4,1,1,1,1,1,1. Show that T does not have a required labeling with the 15 nonzero, 4-dimensional 01-vectors.