## P1

y-x-u, y-x-v-u, y-x-w-u, y-x-w-v-u, y-w-u, y-w-v-u, y-w-x-u, y-w-x-v-u, y-w-v-x-u, y-z-w-u, y-z-w-v-u, y-z-w-x-u, y-z-w-x-v-u, y-z-w-v-x-u.

## P2.

1. x to z:

x-y-z, x-y-w-z, x-w-z, x-w-y-z, x-v-w-z, x-v-w-y-z, x-u-w-z, x-u-w-y-z, x-u-v-w-z, x-u-v-w-y-z

1. z to u:

z-w-u, z-w-v-u, z-w-x-u, z-w-v-x-u, z-w-x-v-u, z-w-y-x-u, z-w-y-x-v-u, z-y-x-u, z-y-x-v-u, z-y-x-w-u, z-y-x-w-y-u, z-y-x-v-w-u, z-y-w-v-u, z-y-w-x-u, z-y-w-v-x-u, z-y-w-x-v-u, z-y-w-y-x-u, z-y-w-y-x-v-u

1. z to w:

z-w, z-y-w, z-y-x-w, z-y-x-v-w, z-y-x-u-w, z-y-x-u-v-w, z-y-x-v-u-w

## P9

will not. Because reducing the link does not cause loops. Connecting two nodes together by a link is equivalent to reducing the weight of the link from infinity to finite.

## P13

will not. Longer acyclic routes are superior to shorter acyclic routes on an economical level.

## P15.

1. I1. Because this interface begins the least cost path from 1d towards the gateway router 1c.
2. I2. Because I2 begins the path that has the closest NEXT-HOP router.
3. I1. Because I1 begins the path with the shortest AS-PATH.