

1. Answer:

Step	N'	D(z), p(z)	D(y), p(y)	D(w), p(w)	D(v), p(v)	D(t), p(t)	D(u), p(u)
0	x	8, x	6, x	6, x	3, x	∞	∞
1	xv	8, x	6, x	6, x		7, v	6, v
2	xvy	8, x		6, x		7, v	6, v
3	xvyu	8, x				7, v	
4	xvyut	8, x					
5	xvyutz						

2. Answer:

$D_x(x)$ $H_x(x)$	$D_y(x)$ $H_y(x)$	$D_z(x)$ $H_z(x)$	$D_u(x)$ $H_u(x)$	$D_v(x)$ $H_v(x)$	$D_w(x)$ $H_w(x)$	$D_t(x)$ $H(x)$
(0, x)	(6, x)	(6, z)	(∞ ,)	(3, x)	(6, x)	(∞ ,)_
(0, x)	(6, x)	(8, z)	(6, v)	(3, x)	(6, x)	(7, v)
(0, x)	(6, x)	(8, z)	(6, v)	(3, x)	(6, x)	(7, v)

3. Answer :

(1).

$D_A(A), H_A(A)$	$D_B(A), H_B(A)$	$D_C(A), H_C(A)$	$D_D(A), H_D(A)$
(0, A)	(1, A)	(2, B)	(3, C)
(0, A)	(3, C)	(2, B)	(3, C)
(0, A)	(3, C)	(4, B)	(3, C)
(0, A)	(5, C)	(4, B)	(5, C)
(0, A)	(5, C)	(6, B)	(5, C)

.....
(0, A)	(∞ , C)	(∞ , B)	(∞ , C)
(0, A)	(∞ , C)	(∞ , B)	(∞ , C)

(2).

$D_A(A), H_A(A)$	$D_B(A), H_B(A)$	$D_C(A), H_C(A)$	$D_D(A), H_D(A)$
(0, A)	(1, A)	(2, B)	(3, C)
(0, A)	(3, C)	(2, B)	(3, C)
(0, A)	(3, C)	(4, B)	(3, C)
(0, A)	(5, C)	(4, B)	(5, C)
.....
(0, A)	(9, C)	(10, B)	(9, C)
(0, A)	(11, C)	(10, B)	(10, A)
(0, A)	(11, C)	(11, D)	(10, A)
(0, A)	(12, C)	(11, D)	(10, A)
(0, A)	(12, C)	(11, D)	(10, A)

(3).

$D_A(A), H_A(A)$	$D_B(A), H_B(A)$	$D_C(A), H_C(A)$	$D_D(A), H_D(A)$
(0, A)	(1, A)	(2, B)	(3, C)
(0, A)	(∞ , A)	(2, B)	(3, C)
(0, A)	(∞ , A)	(∞ , B)	(3, C)
(0, A)	(∞ , A)	(∞ , B)	(∞ , C)
(0, A)	(∞ , A)	(∞ , B)	(∞ , C)

4. Answer:

a. id learns about x from iBGP because it gets reachability information from AS-internal routers

b. It will be equal to I1, because I1 has the least cost path from id to the gateway router 1c compared with I2 (hot potato routing)

c. It will be equal to I2. Although I1 and I2 has the same number of AS-PATH, I2 has closest NEXT-HOP router.

d. I will be equal to I1, because I1 has the least number of AS-PATH.