HW 5
Nabin Shrestha

1)

Graph II

a)

$def = \{x\}$ at node 1, $def = \{x\}$, $use = \{x\}$ at node 3, $use = \{x\}$ at node 6.
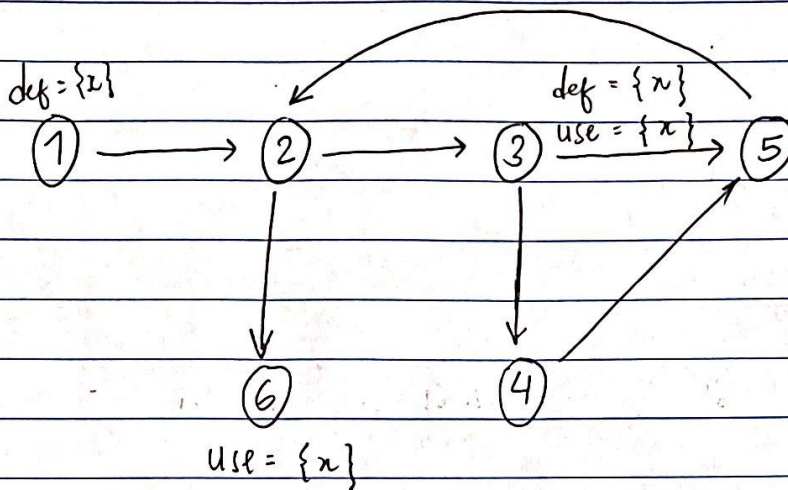
b) $\{ \ [1, 2, 3] \ , \ [1, 2, 6] \ , \ [3, 4, 5, 2, 3] \ , \ [3, 5, 2, 3],$
$[3, 4, 5, 2, 6] \ , \ [3, 5, 2, 6] \ \}$

c)

Test paths	du-paths
t_1	$[1, 2, 6]$
t_2	$[1, 2, 3], [3, 4, 5, 2, 3], [3, 5, 2, 6]$
t_3	$[1, 2, 3], [3, 4, 5, 2, 6], [3, 5, 2, 3]$
t_4	$[1, 2, 3], [3, 5, 2, 6]$

d) t_2 or t_3 or t_4

e) $\{ t_1, t_2 \}$ or $\{ t_1, t_3 \}$

f) $\{ t_1, t_2, t_3 \}$

Graph III

a)

def = $\{x\}$ use = $\{n\}$

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use = $\{x\}$ (at 6)   use = $\{n\}$ (at 5)   def = $\{n\}$ (at 4)
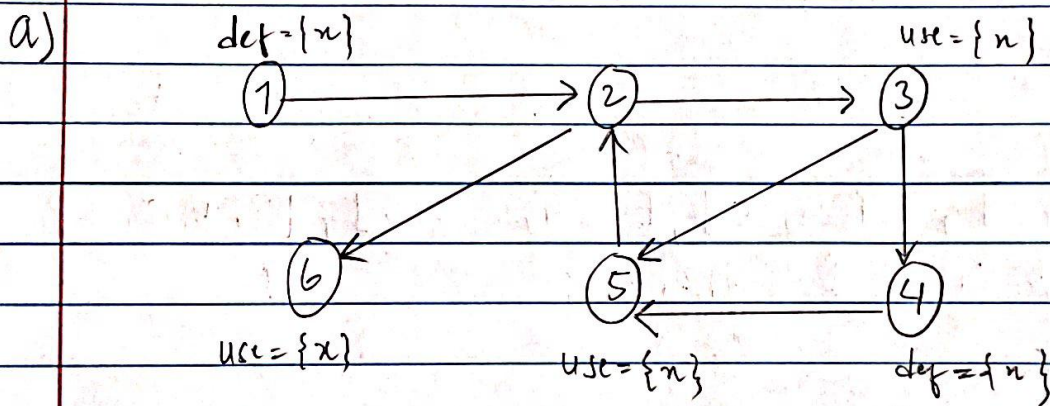
b) $\{ [1, 2, 3], [1, 2, 6], [1, 2, 3, 5], [4, 5]$
$[4, 5, 2, 3], [4, 5, 2, 6] \}$

c)

Test paths	du-paths direct touring	side trips
t_1	$\{ [1,2,3], [1,2,3,5] \}$	$\{ [1,2,6] \}$
t_2	$\{ [1,2,3], [4,5,2,6]$ $[4,5] \}$	$\{ [1,2,6] \}$

d) $\{ t_2 \}$

e) $\{ t_1, t_2, [1,2,6], [4,5,2,3,5,2,6] \}$

f) $\{ t_1, t_2, [1,2,6], [4,5,2,3,5,2,6] \}$