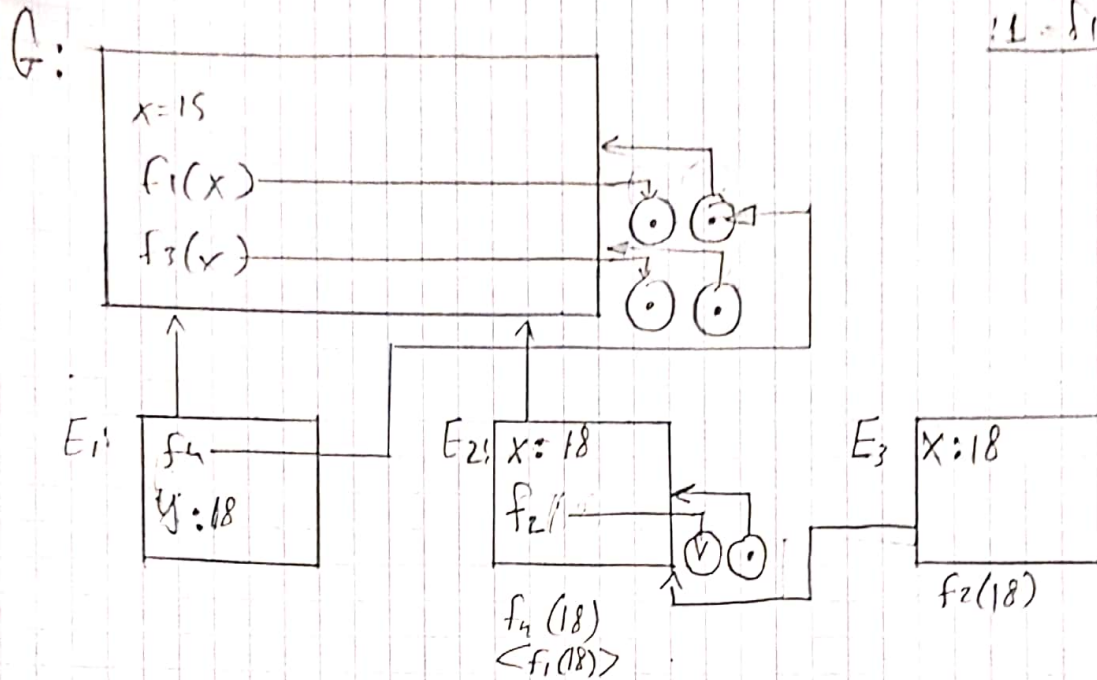


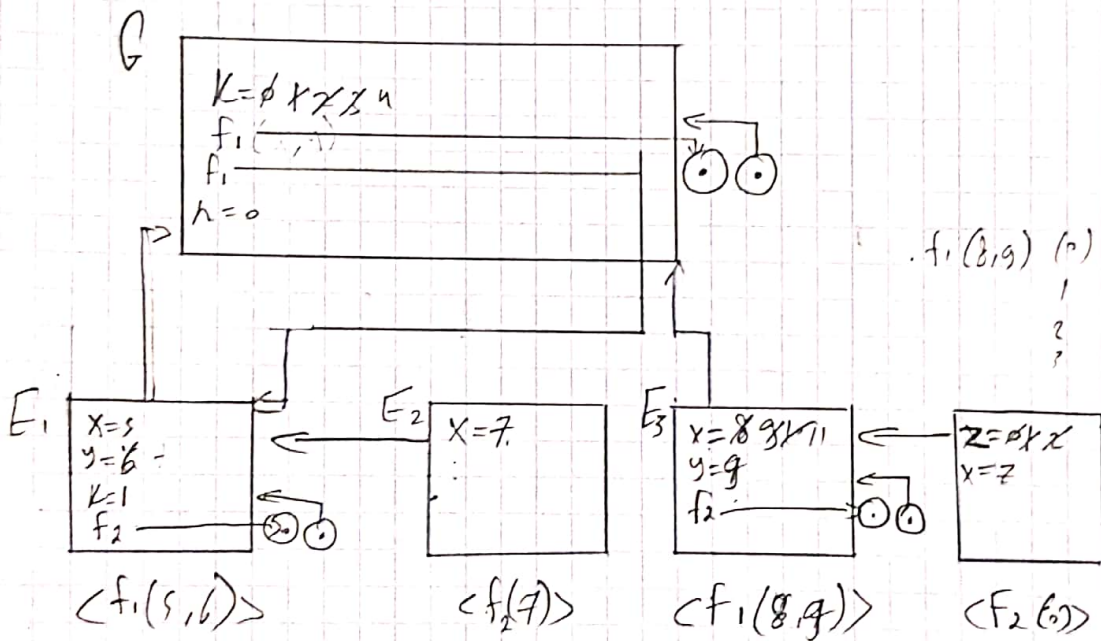
2. $\phi_{10} X$

מחיר : קייל'מרטון סטיב -
 1.1 - 1.1



Output: 1350

12 = 8102



$x=1$	$y=6$	$x=7$
$x=1$	$y=9$	$x=0$
$x=1$	$y=10$	$x=1$
$x=2$	$y=11$	$x=2$
$x=3$		
$x=4$		

$$f_1(n)$$

$$n = 0, 1, 2, 3$$

Q:

f_i

λ_i

λ_i

Diagram illustrating the execution of a program with a loop, showing the state of variables X and y and the sequence of function calls.

Initial Block:

- $X = 52$
- f_2
- f_3
- f_4
- f_5
- $y = 0$
- λ

Execution Flow:

- Block f_2 :** $X = 52$ (labeled E_2)
- Block f_3 :** $X = 52$ (labeled E_3)
- Block f_4 :** $X = 52$ (labeled E_4)
- Block f_5 :** $X = 52$ (labeled E_5)
- Block f_6 :** $X = 52$ (labeled E_6)
- Block f_7 :** $X = 5$ (labeled E_7)
- Block f_8 :** $X = 5$ (labeled E_8)
- Block f_9 :** $X = 5$ (labeled E_9)
- Block f_{10} :** $y = 0$ (labeled E_{10})
- Block f_{11} :** $X = 5$ (labeled E_{11})

Final State:

- $y = 0$
- λ

Labels:

- E_i (Initial)
- E_1 (Loop Header)
- E_2 to E_{11} (Loop Body)

Handwritten Note: 1: 23h1w p 28

The diagram illustrates the execution of a program with a loop and conditional statements. It shows the state of variables and control flow at various points:

- Initial State:**
 - Variables: $x = 9, 4, 3$
 - Function pointers: f_2, f_3, f_4, f_5
 - Loop counter: $y = 2$
 - Condition: 2
- Execution Flow:**
 - Block 1:** $x = 9, 4, 3$ (Entry: E_{12} , Exit: E_{13})
 - Block 2:** $x = 9, 4$ (Entry: E_{14} , Exit: E_{15})
 - Block 3:** $x = 9, 4, 3/4/5$ (Entry: E_{16} , Exit: E_{17})
 - Block 4:** $x = 9, 4$ (Entry: E_{18} , Exit: E_{19})
 - Block 5:** $x = 9$ (Entry: E_{20} , Exit: E_{21})
 - Block 6:** $x = 9$ (Entry: E_{22} , Exit: E_{23})
 - Block 7:** $x = 9$ (Entry: E_{24} , Exit: E_{25})
 - Block 8:** $x = 0$ (Entry: E_{26} , Exit: E_{27})
- Control Flow and Annotations:**
 - Arrows indicate the flow between blocks.
 - Annotations include function calls: $f_2(f_4(x))$, $f_4(9, 4, 3)$, $f_2(f_4(9, 4))$, $f_5(9, 4)$, f_3 , $f_5(x = 9, 4)$, $f_3(9, 4)$, $f_5(9, 4)$, f_3 , f_5 , f_3 , f_5 , f_3 , f_5 .
 - Annotations include variable values: $x = 9, 4, 3$, $x = 9, 4$, $x = 9, 4, 3/4/5$, $x = 9, 4$, $x = 9$, $x = 9$, $x = 9$, $x = 0$.
 - Annotations include loop counter: $y = 2$.
 - Annotations include condition: 2 .
 - Annotations include function pointers: f_2, f_3, f_4, f_5 .
 - Annotations include control flow: $E_{12}, E_{13}, E_{14}, E_{15}, E_{16}, E_{17}, E_{18}, E_{19}, E_{20}, E_{21}, E_{22}, E_{23}, E_{24}, E_{25}, E_{26}, E_{27}$.

return y
y = 2