11.1 3, 10, 2, 4

$h_1(x) = x \% 5$

$h_2(x) = 7x \% 8$

open addressing (x) $oa(x,i) = (h_1(x) + i * h_2(x)) \% 5$

$Oa(3,0) = (h(3) \cdot h_2(3)) \% 5 = 3.$

| | | | 3 | |

i=3.

$Oa(10,0) = 0$

| 10 | | | 3 | | |

i=0.

$Oa(2,0) = 2$

| 10 | | 2 | 3 | |

$Oa(4,0) = 4$ collision.

$Oa(4,1) = h_1(4) + 1 \cdot h_2(4) \% 5 = 4 + 7 \% 8 = 4$ collision.

$Oa(4,2) = (4 + 2 \cdot 4) \% 5 = 2$ collision.

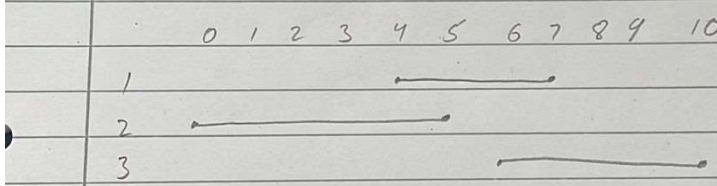
$Oa(4,3) = (4 + 3 \cdot 4) \% 5 = 1$

| 10 | 4 | 2 | 3 | |

0 1 2 3

11.2a

1 - [4, 7) length = 3.
2 - [0, 5) l = 5
3 - [6, 10) l = 4.



Optimal solution 2, 3.
greedy algorithm chooses 1 as it is the shortest activity which eliminating other 2 activities.