M. Satvi Reddy
192311038
CSA-0688-DAA

1. Max and min

| 89 | 45 | 23 | 101 | 56 | 92 | 76 | 57 | 89 | 12 | 89 |

| 89 | 45 | 23 | 101 | 56 | 92 |

| 76 | 57 | 89 | 12 | 89 |

| 89 | 45 | 23 |

| 101 | 56 | 92 |

| 76 | 57 | 89 |

| 12 | 89 |

| 89 | 45 | | 23 | | 101 | 56 | | 92 | | 76 | 57 | | 89 | | 12 | | 89 |

max - 89
min - 23

max - 101
min - 56

max-89
min - 57

max-89
min - 12

max -101
min - 23

max-89
min - 12

max - 101
min-12

2) search 4,   using binary search.

A. $[1,2,3,4,5,6,7,8,9,10]$

i = 0
j = 9

$mid = \dfrac{0+9}{2} = 5$

$a[mid] = 6$

$a[mid] > 4 \Rightarrow j = mid-1$

i = 0
j = 4

$mid \dfrac{0+4}{2} = 2$

$a[2] < 4 \Rightarrow i = mid+1$

i = 3
j = 3

$mid = \dfrac{3+3}{2} = 3$

$a[mid] < 4$;

3) $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ $B = \begin{bmatrix} e & f \\ g & h \end{bmatrix}$

$a = \begin{bmatrix} 3 & 7 \\ 4 & 9 \end{bmatrix}$ and $B = \begin{bmatrix} 6 & 2 \\ 5 & 8 \end{bmatrix}$

P = 168

Q = 78

R = -18

S = -9

T = 80

U = 8

V = -26 .

$C = \begin{bmatrix} 53 & 62 \\ 69 & 80 \end{bmatrix}$

$; 123, Y: 321$

$k: (12|3, 32|1)$

$a = 12, \quad b = 3, \quad c = 32, \quad d = 1$

$x * y = ac * 10^2 + (a+b)(c+d) - ac - bd) * 10^1 + bd.$

$\qquad ac = 12 \times 32 = 384$

$\qquad bd = 3$

$(a+b)(c+d) = (12+3)(32+1) = 495$

$\qquad XY = 384 \times 10^2 + (495 - 384 - 3) * 10^1 + 3$

$\qquad XY = 38400 + 1080 + 3 = 39483.$