| *** | | |
|--|---|---|
| 012.1:- | | |
| a) | x = 8, as = 15 Input: A, x | 17 12 2 80 20 35 1 15 30 10 |
| | | 1 |
| | swaplax, ar) & | 17 12 2 80 20 35 1 10 30 15 |
| | initialize i=1 & j=n-1 | j 1 |
| | increment i while ai < an & | 17 12 2 80 20 35 1 10 30 15 |
| | decrenced jubile of >an | i |
| | swap (ai, aj) | 10 12 2 80 20 35 1 17 30 15 |
| | | ; <u>†</u> |
| | increment i while aicana | 10 12 2 80 20 35 1 17 30 15 |
| | decrement; while a j Zan | → i j ← ↑ |
| | swap (ai, aj) | 10 12 2 1 20 35 80 17 30 15 |
| | | j 7 |
| | increment i while ai < an & | 10 12 2 1 20 35 80 17 30 15 |
| | Stop since i = j | $\rightarrow i=j \leftarrow \uparrow$ |
| | swap (ai, an) since aizan | 10 12 2 1 15 35 80 17 30 20 |
| | 0 styrt A12 x'=5 | |
| | | 17 12 2 80 20 35 1 15 30 10 |
| 5 | $x=3$, $a_2=2$ 4 np. ± 1 4 , x | 17 12 2 80 20 35 1 15 30 10 |
| | | 17 12 10 80 20 35 1 15 30 2 |
| | Swap (ax, an) & | 11 12 10 10 12 13 1 13 10 2 |
| | initialize i=1 4 j= n-1 | 17 12 10 80 20 35 1 15 30 9 |
| | increment i while ai < an ? | i i - 1 |
| | decrement juhile aj ≥ an | 1 12 10 80 20 35 17 15 30 2 |
| • | · swap (ai, aj) | i |
| 6 | increment i while ai < an & | 1 12 10 80 20 35 17 15 30 2 |
| AND DESCRIPTION OF THE PARTY OF | | -> i=j4 |
| | Stop since i=j | 1 2 10 80 20 35 17 15 30 12 |
| | Output A' & oc' = 2 | 1 |
| 3 | - De - A | 1+1+1+1 |
| | | |
| | | H + + + + + + + + + + + + + + + + + + + |
| | | |

| | 1 1 1 5 1 2 2 2 20 20 25 1 15 30 10 |
|----------|--|
| c)_ | April: A, x [21=4, a1=80] 17 12 2 80 20 25 1 15 30 10 |
| | 12 10 10 15 20 20 |
| | Swap(ax, an) & 17/12/2/10/20/35/1/15/30/80 |
| | initialize i=1 fj= n-1 |
| | increment i while ai < and 17 12 2 10 20 35 1 15 30 80 |
| | Stop since i=j |
| | Swap (0:+1,an) since ai < an 17 12 2 10 20 35 1 15 20 80 |
| | Oitput A' & x' = 10 |
| | |
| d) | x=7 & a== 1 Supert: A, x 17/12/2/80/20/35/1/15/30/10 |
| <u> </u> | † |
| | Swap (ax, an) & 17/12/2/80/20/35/10/15/30/1 |
| 18 | initialize i=1 = j=n-1 i |
| | increment i while of < an & 17 12 2 80 20 35 10 15 30 1 |
| | Stop since i=j |
| | swap (ai, an) since ai>an 1 12 2 80 20 35 10 15 30 17 |
| | Output A' & 21' = 1 |
| | |
| 0312.3:- | the time have been dear the |
| a) | 71=8, as=15. Input: Ax 17/12/2/80/20/35/1/15/30/10 |
| | |
| | swop(ax, on) & i= the first ax 17/12/2/80/20/35/1/10/30/15 |
| | from left such that ax \an & i |
| | from left such that ax≥an & i j increment j while aj>an 17 12 2 80 90 35 1 10 30 15 |
| | l→j |
| | Swap (ai, aj) & 12 17 2 80 20 35 1 10 30 15 |
| | because tibul -> U |
| | increment; while a; Zan 12 12 12 80 20 35 1 10 30 15 |
| | i -> j |
| | Swap (ai, a) & 12 2 17 80 20 25 1 10 30 15 |
| | + i by 1 → ij |
| | increment jubile a; zan 12 2 17 80 20 35 1 10 30 15 |
| | increment i -i |
| | |

| | swap (a; , a;) & | 12 2 1 80 20 35 17 10 30 15 |
|------|---|---|
| | increment i by 1 | - i j |
| | increment jubile of Zan | 12 2 1 80 20 35 17 10 30 15 |
| • | | i - j 7 |
| | swap (ai, aj) & | 12 2 1 10 20 13 11 30 3 |
| | inosement i by 1 | 10 9 1 10 20 35 17 80 70 15 |
| | increment; while a; > and | 12 2 1 10 20 35 17 80 70 15 |
| | Stop since j = n | 12 2 1 10 15 35 17 80 30 20 |
| | swap (ai, an) & | 1 2 4 1 10 10 100 100 100 100 100 100 100 1 |
| | Output A' & x = 5 | |
| | 0 . A . A . A | 17 12 2 80 20 35 1 15 30 10 |
| b, |) x=3&a3=l:-Input: A, x | A |
| | swap(ax, an) & i = the first ax | 17 12 10 80 20 35 1 15 30 2 |
| | | ij |
| | from left such that an = an = increment j while aj = an | 17 12 10 80 20 35 1 15 30 2 |
| | | i -> j 1 |
| | Swap (ai, aj) & | 11 12 10 180 20 133 11 |
| | inesement (a) by 1 | 1 12 10 80 20 35 17 15 30 2 |
| | increment j while ajzans | 1 12 10 80 20 35 17 15 30 2 -> j= 1 |
| | Stop since j = n | 1 2 10 80 20 35 17 15 30 12 |
| | swap (ai, an) & | 12 2 10 80 20 33 17 13 1 - 12 |
| | Output A'& x = l | |
| | | 17 12 2 80 20 35 1 15 30 10 |
| c) | $x=4$, $a_1=80$ Input: A, $x=4$ |) |
| | swap (ax, an) + 1 = the first ax from | 17 12 2 10 20 35 1 15 30 80 |
| | left sit ax≥an & stop since i=n | ->j=↑ |
| | Ortent A'&x = 10 | |
| d) • | x=7, 97=1 Synt Ax | 17 12 2 80 20 35 1 15 30 10 |
| a/ | 1-7, "17-1 Jym PJ | 1 4 |
| | Swap (or m) A := H. C. A. C. | 17 12 2 80 20 35 10 15 30 1 |
| | Swap (ox, on) & i = the first an from left such that ax > an & j = i+1 | i j |
| | | |





