

```

public static void UKG_Method_03(int[] arr) {
    int n = arr.length, itr = 0, p = -1, countZeros = 0;
    while (itr < n) {
        if (arr[itr] != 0) {
            arr[++p] = arr[itr];
        } else {
            countZeros++;
        }
        itr++;
    }
    while (countZeros-- > 0) {
        arr[++p] = 0;
    }
}

```



20 x 500

Q (last 2 hours)

Q (starting 2 hours)

Q1 = 6-11

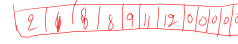
16 = 0
20 =

9 x 6 = 54

hwl = arr[0] x arr[6]
hwl = arr[0] x arr[1]

11 / 15

15 - 11 = 4



total copy: 3 9 11 12 0 0 0 0

total copy: 2 1 6 8 9 11 12 0 0 0 0

```

int zp = 0, nzp = n - 1; // zp : zero pos
for (int i = 0; i < n; i++) {
    if (arr[i] != 0) {
        ans[nzp] = arr[i];
    } else {
        ans[zp] = 0;
    }
    zp++;
}

for (int i = 0; i < n; i++) {
    arr[i] = ans[i];
}

```



$$a + b = \text{target}$$

$$a + b = \text{target} - c$$

$$[a + b = (target)]$$

↑

```
public static int maximumPairProduct(int[] arr, int lb, int rb) {
    if (rb - lb + 1 < 2)
        return Integer.MIN_VALUE;

    int num1 = arr[rb] * arr[rb - 1];
    int num2 = arr[lb] * arr[lb + 1];

    return Math.max(num1, num2);
}

public static int maximumTriplet(int[] arr) {
    int maximumAns = Integer.MIN_VALUE;
    Arrays.sort(arr); // you will apply Bubble Sort

    int n = arr.length;
    for (int i = n - 1; i >= 0; i--) {
        int num = arr[i];
        int maximumPair = maximumPairProduct(arr, lb: 0, i - 1);

        maximumAns = Math.max(maximumAns, maximumPair * num);
    }

    return maximumAns;
}
```

$$num = 15$$

$$ans = 81,90,000 (-70 \times -20 \times 29)$$

1	2	10	15	18	20
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↑

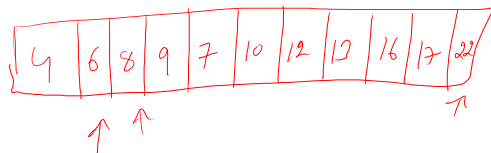
$$1 + (a + b) = 35$$

$$a + b = 34$$

0	1	2	3	4	5	6	7
-70	-20	-10	1	2	10	15	29

$$\begin{aligned} (a, b) &= 1 - a + 1 \\ (a, b) &= 6 - a - 1 \\ (a, b) &\rightarrow 6 - a \\ (a, b) &\} \end{aligned}$$

$$Kx = 90$$



$$4 + 9 + 17$$

$$4 + 10 + 16$$

$$6 +$$

$i=0$	N
$i=1$	N
$i=2$	N
$i=3$	N

$$1 \rightarrow X$$

$$X \rightarrow \underline{\underline{X}}$$



$$\begin{aligned} 1 &\rightarrow N \\ 2 &\rightarrow 2N \\ 3 &\rightarrow 3N \\ 4 &\rightarrow 4N \\ 10 &\rightarrow 10N \end{aligned}$$

$$\begin{aligned} 1 &\rightarrow 4N \\ 10 &\rightarrow 4N \\ 100 &\rightarrow 4N \\ 1000 &\rightarrow 4N \\ 10000 &\rightarrow 4N \end{aligned}$$

