ASSIGNMENT-1

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Q1- public class ComplexExample1 {

```
    public static void main(String[] args) {

        int a = 5;

        int b = 3;

        int c = a++ * --b + 2 * a-- / ++b;

        System.out.println(a + " " + b + " " + c);

    }

}
```

OUTPUT : 5 3 14

Q2-public class ComplexExample2 {

```
    public static void main(String[] args) {

        int x = 8;

        int y = 2;

        int z = x++ * --y + 2 * x-- / ++y - x++;

        System.out.println(x + " " + y + " " + z);

    }

}
```

OUTPUT : 9 2 9

Q3-

```
public class ComplexExample3 {

    public static void main(String[] args) {

        int a = 5;

        int b = 10;

        int c = ++a * b-- + 2 * a++ / --b - a--;

        System.out.println(a + " " + b + " " + c);

    }

}
```

OUTPUT : 6 8 54

Q-4

```java
public class ComplexExample4 {
    public static void main(String[] args) {
        int x = 6;
        int y = 3;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y--;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 7 2 13

Q-5

```java
public class ComplexExample4 {
    public static void main(String[] args) {
        int x = 6;
        int y = 3;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y--;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 7 2 13

Q-6

```java
public class ComplexExample5 {
    public static void main(String[] args) {
        int a = 7;
        int b = 2;
        int c = a-- * --b + 2 * a++ / ++b - a-- + b++;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 6 3 8

Q7

```java
public class ComplexExample6 {
    public static void main(String[] args) {
        int x = 5;
        int y = 2;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 6 1 12

Q-8

```java
public class ComplexExample7 {
    public static void main(String[] args) {
        int a = 4;
        int b = 3;
        int c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4 / 2;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 3 4 13

Q-9

```java
public class ComplexExample8 {
    public static void main(String[] args) {
        int x = 5;
        int y = 3;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3 / 2;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 6 2 13

Q-10

```
public class ComplexExample9 {
    public static void main(String[] args) {
        int a = 6;
        int b = 3;
        int c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4 / 2 - --a;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 4 4 12

Q-11

```
public class ComplexExample10 {
    public static void main(String[] args) {
        int x = 7;
        int y = 2;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3 / 2 - --x;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 7 1 4

Q-12

```
public class AdvancedExample1 {
    public static void main(String[] args) {
        int a = 8;
        int b = 3;
        int c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4 / 2 + --a;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 6 4 26

Q-13

```java
public class AdvancedExample2 {
    public static void main(String[] args) {
        int x = 5;
        int y = 3;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3 / 2 + --x;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 5 2 18

Q-14

```java
public class AdvancedExample3 {
    public static void main(String[] args) {
        int a = 6;
        int b = 3;
        int c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4 / 2 + --a;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 4 4 20

Q-15

```java
public class AdvancedExample3 {
    public static void main(String[] args) {
        int a = 6;
        int b = 3;
        int c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4 / 2 + --a;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 4 4 20

Q-16

```java
public class AdvancedExample4 {
    public static void main(String[] args) {
        int x = 7;
        int y = 2;
        int z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3 / 2 + --x;
        System.out.println(x + " " + y + " " + z);
    }
}
```

OUTPUT : 7 1 18

Q-17

```java
public class AdvancedExample5 {
    public static void main(String[] args) {
        int a = 8;
        int b = 2;
        int c = a-- * ++b + 2 * a++ / --b - a-- + b++ * 4 / 2 + ++a;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 8 3 35

Q-18

```java
public class AdvancedExample7 {
    public static void main(String[] args) {
        int a = 7;
        int b = 2;
        int c = a-- * ++b + 2 * a++ / --b - a-- + b++ * 4 / 2 + ++a;
        System.out.println(a + " " + b + " " + c);
    }
}
```

OUTPUT : 7 3 31

Q-19

```
public class AdvancedExample10 {

    public static void main(String[] args) {

        int x = 10;

        int y = 3;

        int z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3 / 2 + --x;

        System.out.println(x + " " + y + " " + z);

    }
}
```

OUTPUT : 10 2 31

Q-20

Give the output of this code

```
int a = 9;
a++;
System.out.println (a);
a -= a — - — a;
System .out.println (a);
```

OUTPUT :10

      -10

Q21 :

```
int a = 9;
a++;
System.out.println (a);
a- = a-- - --a;

System .out.println (a);
```

OUTPUT :

    10

    8

① $c = a++ * --b + 2* a--/ ++b$;   find a, b, c values ?
    $a = 5, b = 3$

Ⓢ $c = a++ * --b + 2 * a--/ ++b$ $a = \cancel{4}+1 = 5$
     ②   ④   ①   ③ $b = \cancel{4}+3$

$c = 4 * 3 + 2 * 5 / 4$

   $= 4 * 3 + 2 * 1$

   $= 12 + 2$ o/p :- a = 5 , b = 3, C = 14

   $= 14$

② $z = x++ * --y + 2 * x--/ ++y - x++$, where x = 8, y = 2,
    find x, y, z values ?

Ⓢ $z = x++ * --y + 2 * x--/ ++y - x++$ $x = 8 \cancel{9} \cancel{8} 9$
    $Z = 8 * 1 + 2 * 9/2 - 8$ [Acc to precedence & Associativity] $y = \cancel{1} / 2$
    $z = 8 + 18/2 - 8$
    $z = 8 + 9 - 8$ o/p :- x = 9 , y = 2 , z = 9
    $z = 9$

③ $c = ++a * b-- + 2 * a++/ -b - a--$ where a = 5 & b = 10   find a,b,c ?

   $c = ++a * b-- + 2 * a++/ -b - a--$ $a = \cancel{5} \cancel{6} \cancel{7} 6$
   $c = 6 * 10 + 2 * 6/8 - 7$ $b = 10 \cancel{9} 8$
   $c = 60 + 12/8 - 7$
   $c = 60 + 1 - 7$
   $c = 60 - 6$ o/p :- a = 6, b = Ⓧ , c = 54
   $c = 54$

④ $z = x++ * --y + 2 * x--/ ++y - x++ + y--$ where x = 6, y = 3   find a,b,c ?
⑤ $z = x++ * --y + 2 * x--/ ++y - x++ + y--$ $x = 4 \cancel{7} 6 7$
   $z = 6 * 2 + 2 * 7/3 - 6 + 3$ $y = \cancel{3} \cancel{4} \cancel{3} 2$
   $z = 12 + 14/3 - 6 + 3$
   $z = 12 + 4 - 6 + 3$ o/p :- 7   2   13
   $z = 13$

⑥ $c = a-- * --b + 2 * a++/ ++b - a-- + b++$ where a = 7, b = 2
   $c = a-- * --b + 2 * a++/ ++b - a-- + b++$ $a = 7 \cancel{8} \cancel{7} 6$
   $c = 7 * 1 + 2 * 6/2 - 7 + 2$ $b = 4 \cancel{1} \cancel{2} 3$
   $c = 7 + 12/2 - 7 + 2$
   $c = \cancel{7} + 6 - \cancel{7} + 2$
   $c = 8$ o/p :- 6   3   8

7) $z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3$ where $x=5, y=2$

$z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3$ $x = \cancel{5} \cancel{6} 6$

$z = 5 * 1 + 2 * 6/2 - 5 + 2 * 3$ $y = \cancel{2} \cancel{1} 1$

$z = 5 + 12/2 - 5 + 6$

$z = \cancel{5} + 6 - \cancel{5} + 6$ o/p :- 6 1 12

$z = 12$

8) $c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4/2$ Where $a = 4; b = 3$

$c = 4 * 2 + 2 * 5/3 - 4 + 3 * 4/2$ $a = \cancel{4} \cancel{5} 3$

$c = 8 + 10/3 - 4 + 12/2$ $b = \cancel{3} \cancel{4} 4$

$c = 8 + 3 - 4 + 6$

o/p : 3 4 13

$c = 13$

9) $z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3/2$ Where $x=5, y=3$.

$z = 5 * 2 + 2 * 6/3 - 5 + 3 * 3/2$ $x = \cancel{5} \cancel{6} 6$

$z = 10 + 12/3 - 5 + 9/2$ $y = \cancel{3} \cancel{4} 2$

$z = 10 + 4 - 5 + 4$

o/p :- 6 2 13

$z = 13$

10) $c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4/2 - --a$ Where $a=6, b=3$.

$c = 6 * 2 + 2 * 7/3 - 6 + 3 * 4/2 - 4$ $a = \cancel{6} \cancel{7} \cancel{5} 4$

$c = 12 + 14/3 - 6 + 12/2 - 4$ $b = \cancel{3} \cancel{4} 4$

$c = 12 + \cancel{4} + 6 + \cancel{6} - 4$ o/p :- 4 4 12

$c = 12$

11) $z = x++ * --y + 2 * x-- / ++y - x++ + y-- * 3/2 - --x$ Where $x=7, y=2$.

$z = 7 * 1 + 2 * 8/2 - 7 + 2 * 3/2 - 7$ $x = \cancel{7} \cancel{8} \cancel{7} 7$

$z = 7 * 1 + 2 * \dfrac{8}{2} - 7 + 2 * \dfrac{3}{2} - 7$ $y = \cancel{2} \cancel{1} 1$

$z = 7 + 16/2 - 7 + 6/2 - 7$

$z = 7 + 8 - 7 + 3 - 7$ o/p :- 7 1 4

$z = 4$

12) $c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4/2 + --a$ Where $a=8$
                                                                $b=3$

$c = 8 * 2 + 2 * 9/3 - 8 + 3 * 4/2 + 6$ $a = \cancel{8} \cancel{9} \cancel{7} 6$

$c = 16 + 18/3 - 8 + 12/2 + 6$ $b = \cancel{3} \cancel{4} 4$

$c = 16 + \cancel{6} - 8 + 6 + 6$

$c = 16 \bar{-} 2 + 12$

o/p :- 6 4 26

$c = 2\cancel{6}$

13) z = a++ * --y + 2 * a-- / ++y - a++ + y-- * 3/2 + --x

x = ̶6̶ ̶6̶ ̶6̶ ̶6̶ 5
y = ̶6̶ ̶3̶ ̶3̶ 2

z = 5 * 2 + 2 * 6/3 - 5 + 3 * 3/2 + 5

z = 10 + 12/3 - 5 + 9/2 + 5

z = 10 + 4 - 5 + 4 + 5

z = 18   o/p: 5   2   18

14) c = a++ * --b + 2 * a-- / ++b - a-- + b++ * 4/2 + --a

a = ̶6̶ ̶7̶ ̶6̶ ̶6̶ 4
b = ̶8̶ ̶7̶ ̶8̶ 4

15) c = 6 * 2 + 2 * 7/3 - 6 + 3 * 4/2 + 4

c = 12 + 14/3 - 6 + 12/2 + 4

c = 12 + 4 - 6 + 6 + 4

c = 20   o/p:- 4   4   20

16) a++ * --y + 2 * a-- / ++y - a++ + y-- * 3/2 + --x

x = ̶7̶ ̶8̶ ̶7̶ ̶8̶ 7
y = ̶7̶ ̶8̶ ̶7̶ 1

z = 7 * 1 + 2 * 8/2 - 7 + 2 * 3/2 + 7

z = 7 + 16/2 - 7 + 6/2 + 7

z = 7 + 8 - 4 + 3 + 7

z = 18   o/p:- 7   1   18

17) c = a-- * ++b + 2 * a++ / --b - a-- + b++ * 4/2 + ++a

a = ̶8̶ ̶7̶ 8 ̶7̶ 8
b = ̶7̶ ̶8̶ ̶7̶ 3

c = 8 * 3 + 2 * 7/2 - 8 + 2 * 4/2 + 8

c = 24 + 14/2 - 8 + 8/2 + 8

c = 24 + 7 - 8 + 4 + 8

c = 35   o/p:- 8   3   35

18) c = a-- * ++b + 2 * a++ / --b - a-- + b++ * 4/2 + ++a

a = ̶7̶ ̶8̶ ̶7̶ ̶8̶ 7
b = ̶7̶ ̶8̶ 7 3

c = 7 * 3 + 2 * 6/2 - 7 + 2 * 4/2 + 7

c = 21 + 12/2 - 7 + 8/2 + 7

c = 21 + 6 - 7 + 4 + 7

c = 31   o/p:- 7   3   31

19) z = a++ * --y + 2 * a-- / ++y - a++ + y-- * 3/2 + --x

x = ̶10̶ ̶10̶ ̶11̶ 10
y = ̶8̶ ̶2̶ 2

z = 10 * 2 + 2 * 11/3 - 10 + 3 * 3/2 + 10

z = 20 + 22/3 - 10 + 9/2 + 10

z = 20 + 7 - 10 + 4 + 10

z = 31   o/p:- 10   2   31

20) a = 9;   a = ̶9̶ 10   a = ̶10̶ ̶9̶ 8
    a++;
    Print(a); //9   a = a - (a-- - --a)
    a -= a-- - --a;   = 10 - (10 - 8)
    Print(a);   = 10 - 2
                          = 8