

Ques find mid of 3 no.

```
if ( (a > b && a < c) || (a < b && a > c) ) {
    System.out.println(a);
} else if ( (b > a && c > b) || (a > b && b > c) ) {
    System.out.println(b);
} else if ( (c > a && b > c) || (a > c && c > b) ) {
    System.out.println(c);
}
```

$48 > 59 \&\& 48 < 9$
 $48 < 59 \&\& 48 > 9$

e.g., a
48 b c
 59 9

↳ While loop

Syntax // initiator

```
while ( condition ) {
    // statement
    Syso("Hello");
    // incre/decrement
}
```

Note:- for loop & while loop both are pre-checking loops
 do while loop is a post check loop.

↳ do while // initiator // int i=0;

syntax

```
do {
    //statement
    Syso("Hello");
} while ( condition )
```

HW_GKSTR15 Print_Even

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
for (int i = 0; i <= n; i+=2) {
    System.out.println(i);
}
```

n = 40

```
int i = 2;
while (i <= n) {
    System.out.println(i);
    i+=7;
}
```

2
9
16
23
30
37

i = 2 8 16 23 30 37 44

37 <= 40 23 <= 40
44 <= 40 30 <= 40

```
// for (int i = n; i > 0; i -= 3) {
//     System.out.println(i);
// }
```

```
int i = 1;
while (i <= n) {
    System.out.println(n);
    n -= 3;
}
```

console

```
20
17
14
11
8
5
2
```

$n = 20$

$i = 1$

$(1 \leq 20) \checkmark$

$(1 \leq 17) \checkmark$

$(1 \leq 14) \checkmark$

$(1 \leq 11) \checkmark$

$(1 \leq 8) \checkmark$

$(1 \leq 5) \checkmark$

$(1 \leq 2) \checkmark$

$(1 \leq -1) \times$

$n = 30$
 $k = 4$

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
int k = scn.nextInt();
int ans = Integer.MAX_VALUE;
for (int i = 0; ans >= 0; i++) {
    if (ans != Integer.MAX_VALUE) {
        System.out.println(ans);
        ans = n - i * k;
    }
}
```

$2 \neq 5$

$ans \geq 0$

$(ans < 0) \rightarrow stop$

$ans \neq \infty$

$\infty \neq \infty$

$ans \neq \infty$

$i = 0, ans \geq 0$
 $30 \geq 0$

$n, n-k, n-2k, n-3k, \dots$

```
for (int i = n; i >= 0; i -= k) {
    System.out.println(i);
}
```

$n = 30$

$k = 4$

$i \geq 0$

$i = 30$

$i = 26$

$i = 22$

$i = 18$

\vdots

console

30

26

22

18

14

10

6

2

console

$ans = \infty$

$ans = 30 - 0 \times 4$
 $= 30$