

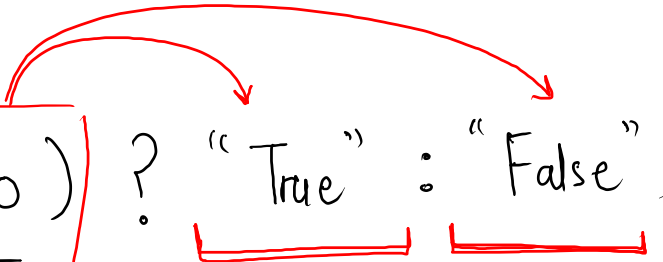
# ⇒ Comparison and logical operators

(Relational)

Greater than 100 or not

int x = 10      false  
x = 110      true

String ans = ( x > 100 ) ? "True" : "False";



Ternary operator

code

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt();  
  
    String ans = (x > 100) ? "True" : "False";  
    System.out.println(ans);  
}
```

true

false

= x

x

Ternary operator

int x = 4;

int a = (x == 3) ? 5 : 7;

print(a);

# xyzw

i/p

int x = 5 ;

int y = 6 ;

int z = 10 ;

int w = 3 ;

boolean ans = ((x \* y) == (z \* w));

code

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

```
    Scanner scn = new Scanner(System.in);
```

```
    int x = scn.nextInt();
```

```
    int y = scn.nextInt();
```

```
    int z = scn.nextInt();
```

```
    int w = scn.nextInt();
```

```
    String ans = ((x * y) == (z * w)) ? "True" : "False";
```

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

```
}
```

Note:-

char a = 'c' ;

String b = "+-53AbcZ325" ;

## Even or not

i/p      int a = <sup>54</sup> ;

boolean ans = (a % 2) == 0 ;

ex:

12 % 2 == 0      true

$$\begin{array}{r} 6 \\ 2 \overline{) 12} \\ \underline{12} \\ 0 \end{array}$$

13 % 2 == 0      false

$$\begin{array}{r} 6 \\ 2 \overline{) 13} \\ \underline{12} \\ 1 \end{array}$$

code

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int a = scn.nextInt();  
  
    String ans = ((a % 2) == 0) ? "True" : "False";  
    System.out.println(ans);  
}
```

# Sum is less than 150 or not.

int x = 50 ;

int y = 51 ;

int z = 52 ;

int sum = (x + y + z) ;

boolean ans = (sum > 150) ;

↳ true or false

code

```
public static void main(String[] args) {  
    Scanner scn = new Scanner(System.in);  
    int x = scn.nextInt();  
    int y = scn.nextInt();  
    int z = scn.nextInt();  
    int sum = (x + y + z);  
    String ans = (sum < 150) ? "True" : "False";  
    System.out.println(ans);  
}
```

# ⇒ Logical operators

AND , NOT , OR operator

AND  
=&

a	b	c
T	T	T
T	F	F
F	T	F
F	F	F

(if anyone is false then)  
ans is false

OR  
=||

a	b	c
T	T	T
T	F	T
F	T	T
F	F	F

(if anyone is true then)  
answer will be true

NOT  
!

a	c
T	F
F	T

Que

boolean ans =  $(3 > 2) \ \&\& \ (14 > 3) \text{ :- True}$

boolean ans =  $(40 > 3) \ \&\& \ (40 > 50) \text{ :- False}$

boolean ans =  $(40 \geq 40) \ || \ (50 \geq (2 * 30)) \text{ :- True}$

boolean ans =  $((2 * 3 == 4) \ \&\& \ (6 * 4 == 9)) \ || \ (4 > 2) \text{ :- True}$

boolean ans =  $!(2 * 5 != 10) \text{ :- True}$