Introduction to logical opⁿ & compare operators

int a = 10;

→ assignment opᵣ.

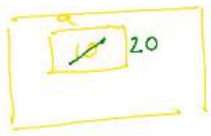
→ *= → a *= 2; → a = a * 2;

-= a -= 2; → a = a - 2;

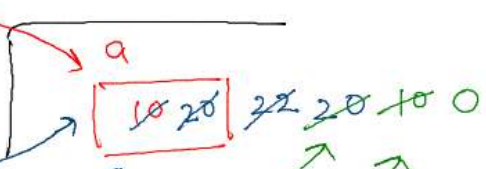
+= a += 2; a = a + 2;

/= a /= 2; a = a / 2;

%= a %= 2; a = a % 2;




```
int a =10;
a *=2;
System.out.println(a);
a +=2;
System.out.println(a);
a -=2;
System.out.println(a);
a /=2;
System.out.println(a);
a %=2;
System.out.println(a);
```



Conditional Operators

- `<` , `>` (greater than, less than)
  If either condition is satisfied then return "true"
- `<=` , `>=` (greater than or equal to, less than or equal to)
- `=` , `==` (assignment opr, compare opr)
- `!=` (not equal to)

`a=10`

`a==a` → true

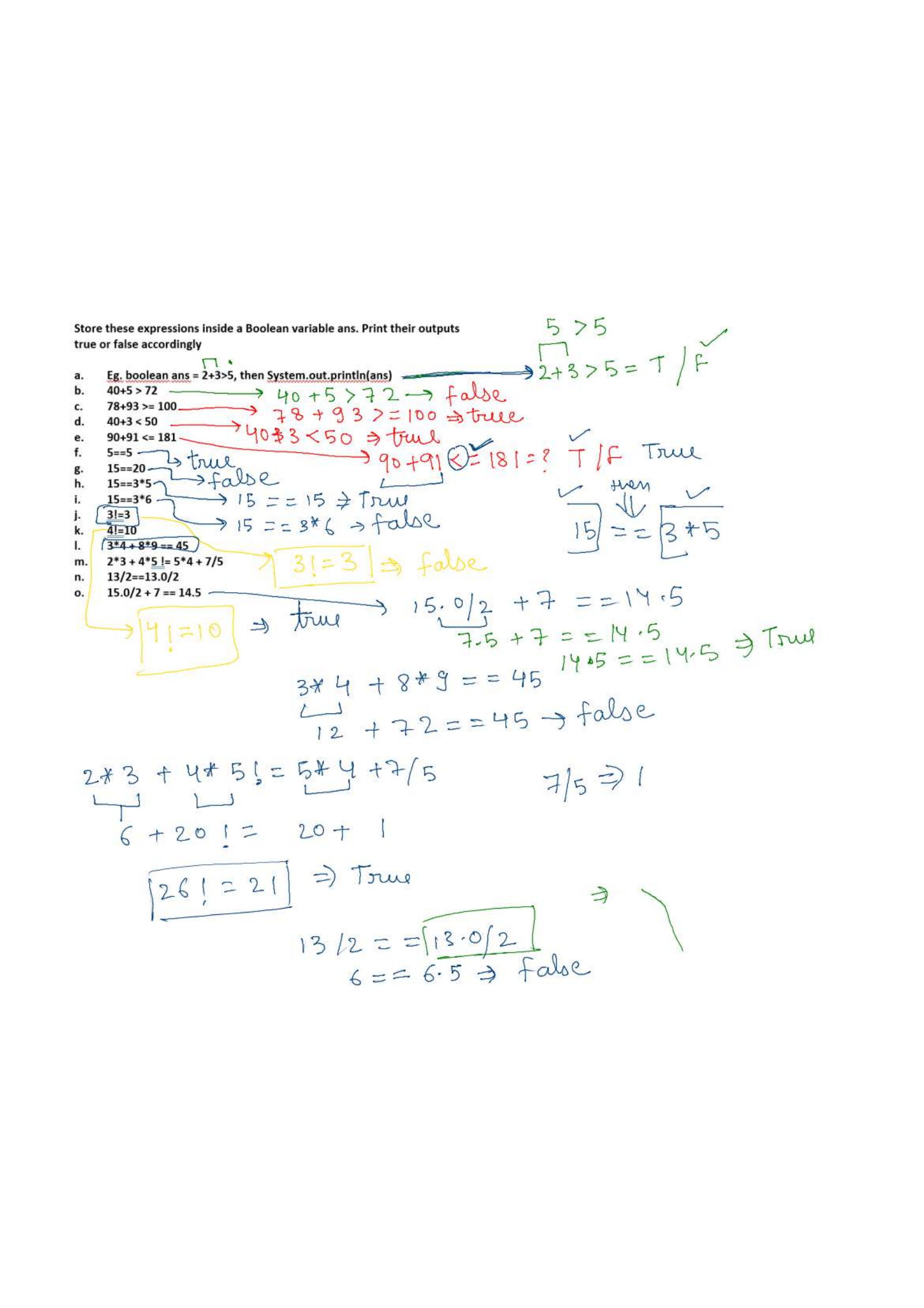
`a!=a` → false

→ target , search input

value ← `=` , `==` compare
assign

Store these expressions inside a Boolean variable ans. Print their outputs true or false accordingly

a. Eg. boolean ans = 2+3>5, then System.out.println(ans)
b. 40+5 > 72
c. 78+93 >= 100
d. 40+3 < 50
e. 90+91 <= 181
f. 5==5
g. 15==20
h. 15==3*5
i. 15==3*6
j. 3!=3
k. 4!=10
l. 3*4+8*9 == 45
m. 2*3 + 4*5 != 5*4 + 7/5
n. 13/2==13.0/2
o. 15.0/2 + 7 == 14.5



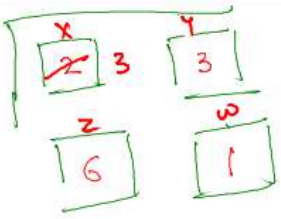
!= True ⇒ if both target & input is not equal
if will return true

false
↳ if both target & input is equal
then it will return false


```
Scanner scn = new Scanner(System.in);
int x = scn.nextInt();
System.out.println(x>100);
/* Enter your code here. Read input from STDIN. Print
```

109 > 100 ⇒ true
100 > 100 ⇒ false

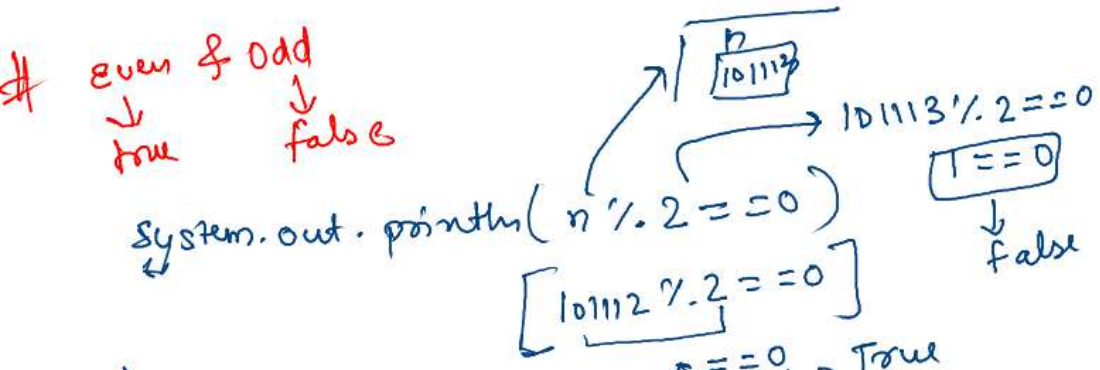
```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int x = scn.nextInt();
    int y = scn.nextInt();
    int z = scn.nextInt();
    int w = scn.nextInt();

    System.out.println(x*y==z*w);
    /* Enter your code here. Read input from STDIN. Print output t
}
```



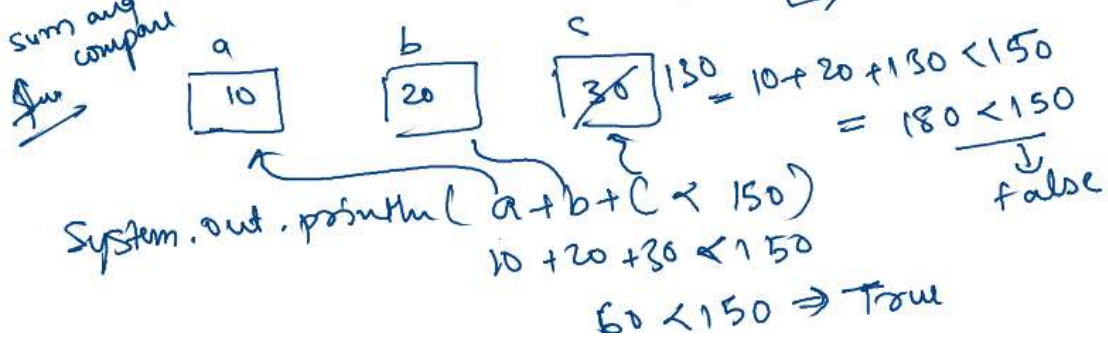
2 * 3 == 6 * 1
↓
true

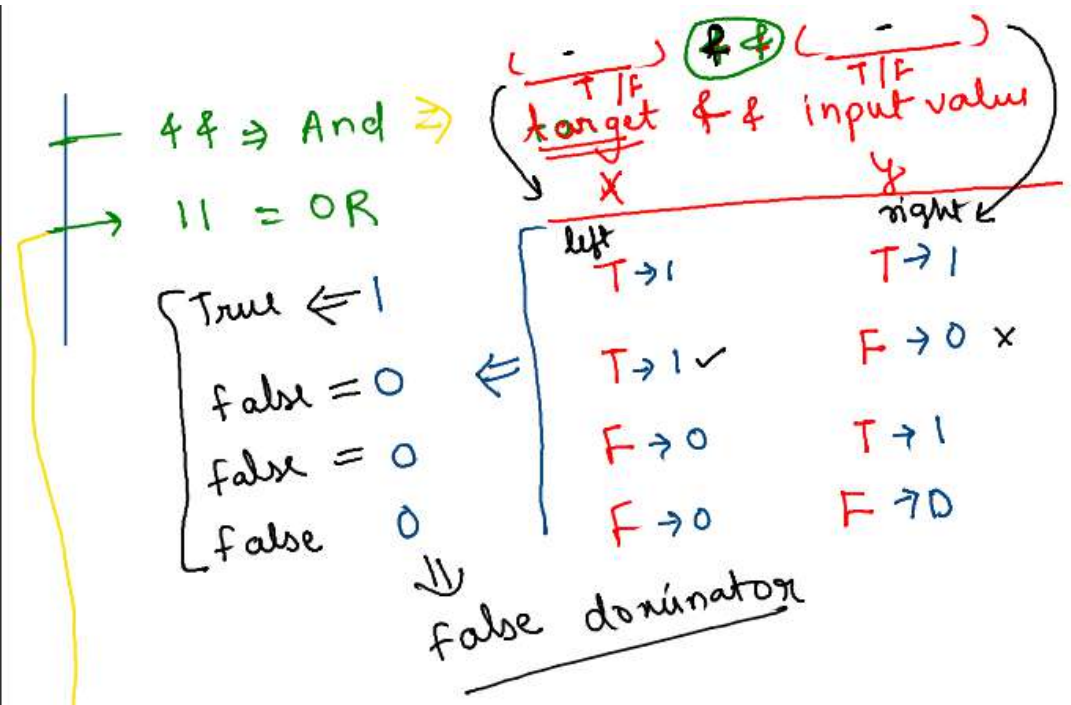
3 * 3 == 6 * 1
↳ false

even & odd
↓ true ↓ false



sum and compare





(+) target || input data

(~~X~~) || (~~X~~ ✓)

T/F T/F

True 1 ⇐ T - 1

True 1 ⇐ T - 1

True 1 ⇐ F - 0

false 0 ⇐ F - 0

T - 1

F - 0

T - 1

F - 0

true is dominator

1. 3>2 && 14>3
2. 40>3 && 40 > 50
3. 40>=40 || 50>=2*25
4. (2*3==4 && 6*4==9) || (4>2)
5. (4>5) && (3>5 && 80==2*40)

① 3>2 && 14>3 ⇒ True (T, T)

② 40>3 && 40>50 ⇒ false (T, F)

③ 40>=40 || 50>=2*25 (T || T ⇒ True)

④ (2*3==4 && 6*4==9) || (4>2)

(f && F) || True

F || T ⇒ true

0 + 1 = 1

⑤ (4>5) && (3>5 && 80==2*40)

f && (F && T)

f && f ⇒ false

0 * 0 = 0