Q1) Given a num (int), categorise it into +ve, -ve, zero

num

20 → positive.

-10 → Negative

0 → zero.

S.op → System.out.print

num = 20

```
if (num > 0){
    Sop ("positive")
}
if (num < 0){
    Sop ("Negative")
}
if (num == 0){
    Sop ("zero");
}
```

```
if (num > 0){
    sop("positive");
else if (num < 0){
    sop ("Negative");
}
else if (num == 0){
    sop ("zero");
}
```

Q2) Given salary (yearly) and rating of employee find and print new salary.

0%	5%	10%	15%	20%
1	2	3	4	5
Needs no expectation	Needs some expectn	Needs Expect	exceeded expectation	Outstanding.

I/p

sal — int

rating — int

ex:- sal = 20,00,000

rat = 3

new_sal = sal + sal × 10/100

= 200000 + 100000 + 10/100

= 22,00,000/-

```
int sal = sc.nextInt();
int rating = sc.nextInt();
```

1 → 0%, 2 → 5%, 3 → 10, 4 → 15%, 5 → 20%

```
if (rating == 1) {
    s.op(sal);
}
else if (rating == 2) {
    // new_sal = sal + sal * 5/100 => (sal + sal * 0.05)
    sop( sal + sal * 0.05);
}
else if (rating == 3) {
    // sal + sal * 10/100 => (sal + sal * 0.1)
    sop ( sal + sal * 0.1);
}
else if ( rating == 4) {
    // sal + sal * 15/100 => ( sal + sal * 0.15)
    sop (sal + sal * 0.15);
}
else {
    sop ( sal + sal * 0.2);
}
```

Quiz

```
n = 13
13 % 3 == 0 X
if ( n % 3 == 0) {
    sop ("D by 3");
}
13 % 5 3 == 0
else if ( n % 5 == 0) { X
    sop("D by 5")
else {
    sop(" D by both");
}
```

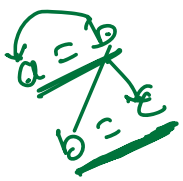
```
c1 = true;
if (c1)
{ sop ("Hi");
else
    sop (" Bye");
}
```

Q3) Given 3 sides of a triangle catagorise it as

equilateral :- all the sides are equal ✓

isosceles :- Any of two sides are equal ✓

scalene :- all sides are not equal.

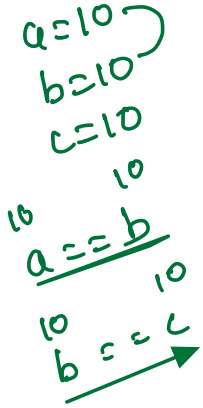


a , b , c

10 , 10 , 10 → equilateral triangle

10 , 5 , 10 → isosceles triangle

5 , 4 , 3 → scalene triangle.



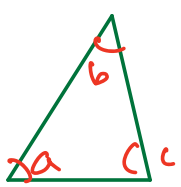
a=10
b=10
c=10

10
10 a==b 10
10 b==c

```
if (a==b && b==c){
    sop("Equilateral");
}
else if(a==b || b==c || a==c){
    sop("Isosceles");
}
else {
    sop("scalene");
}
```

a=b b=c c=a.

Q4 Given 3 angles (int) of triangle, tell wether the triangle is valid of not



a+b+c = 180

a=60, b=30, c=90 → valid
↳ sum = 180

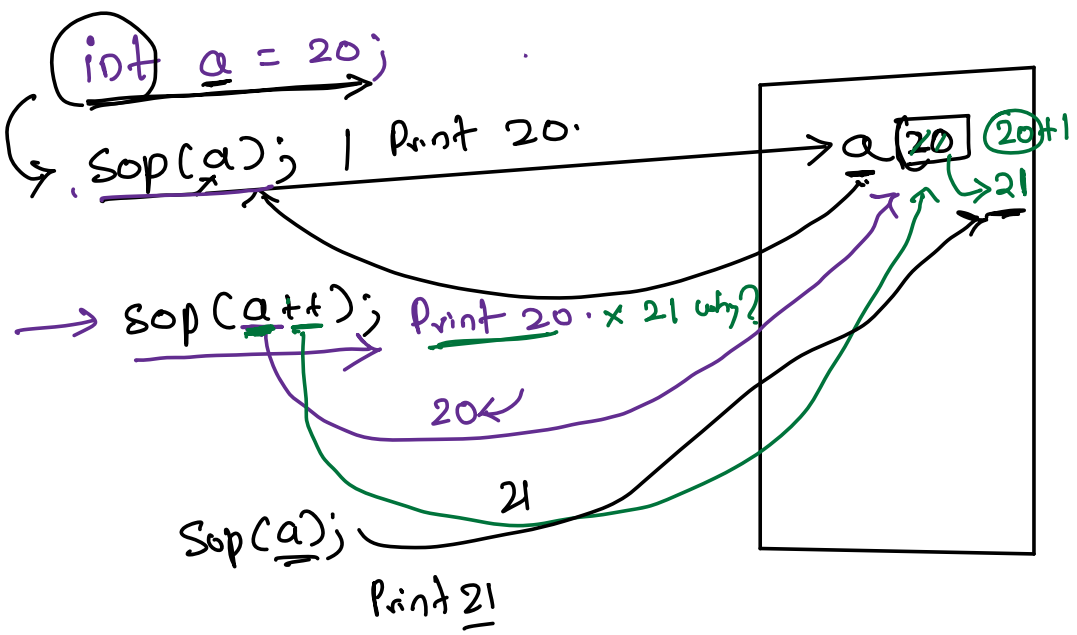
a=20, b=30, c=70 → not valid
↳ sum = 120

a = 50, b = 100, c = 40 → Not valid.

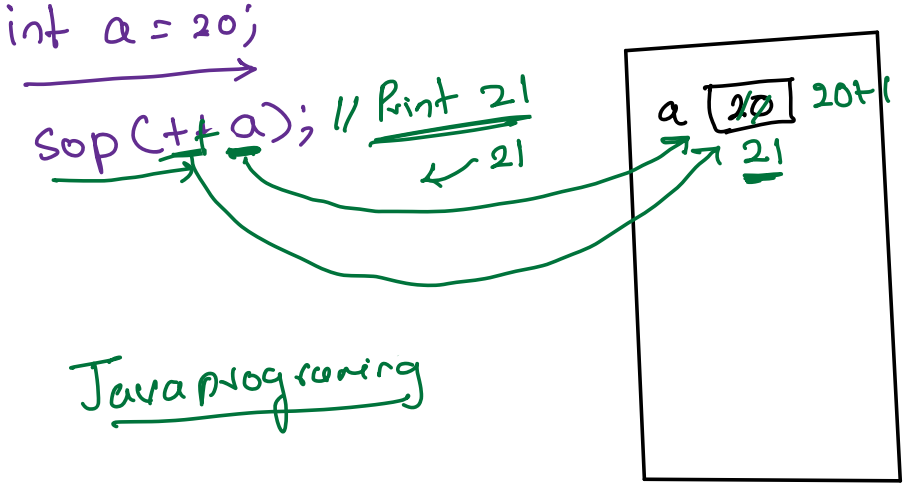
↳ sum = 190

```
if (a + b + c == 180) {
    sop(" valid triangle");
} else {
    sop (" Invalid triangle");
}
```

Doubt session



++a →



a++

++a

Java programming

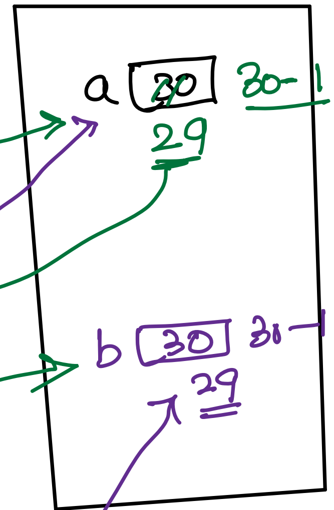
a-- → int a = 30;

Post dec

sop(a--); // Print 30

30

sop(a); // 29



--a   int b = 30;

Pre dec   sop(--b); // 29

29

Sop(b); 29

int a = 10, int b = 20 → 21

a-- = ++b   ++

a = 21

++a   a++

if( )

Sop( )