

* Methods In Java : →

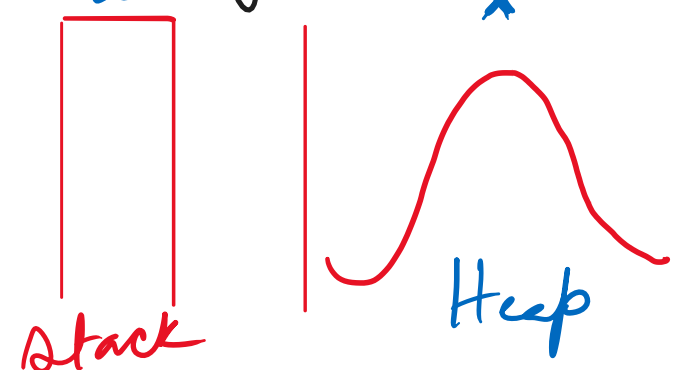
What we call functions in C & C++ are called methods in Java.

{ C & C++ Functions \equiv Java Methods }

Definition : → A method is a block of code which is executed to perform a specific task.

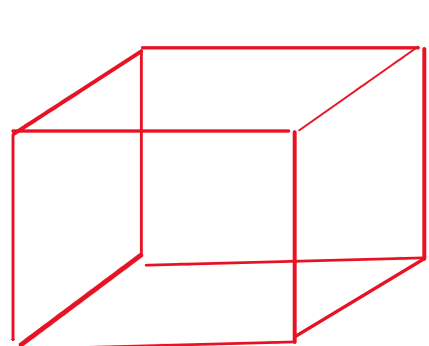
example:

- ① Add two numbers
- ② Open the browser
- ③ Click some button
- etc

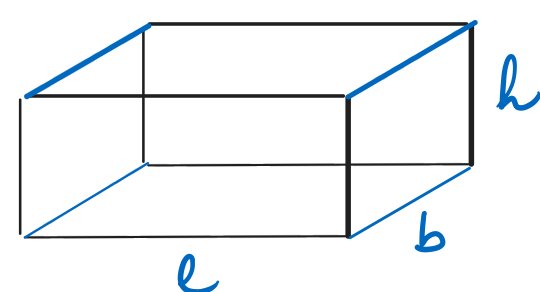


Static void add (a,b) { → (a,b) (Parameters)
print(c+b); }
↓
so no object is required, because object increases heap memory { not recommended }

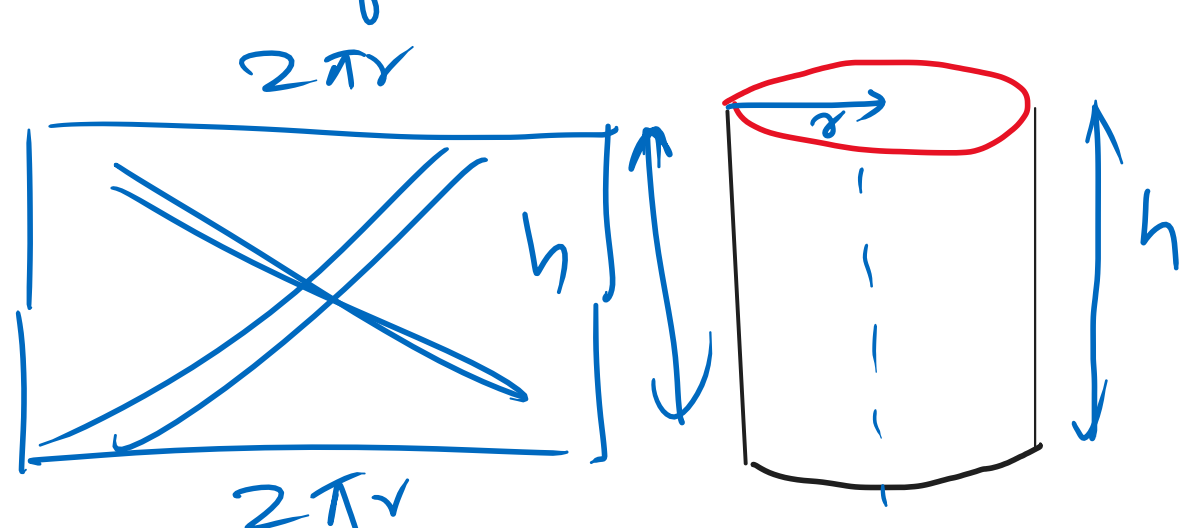
main() {
→ add(1,2); (actual values) (Arguments)
}



Cube side n



TSA of a cube : → $6n^2$



$$2lb + 2bh + 2lh = 2(lb + bh + lh)$$

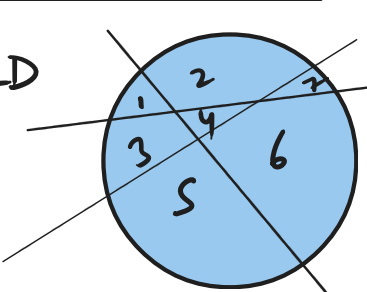
TSA = Cylinder:

$$2\pi rh + 2\pi r^2$$

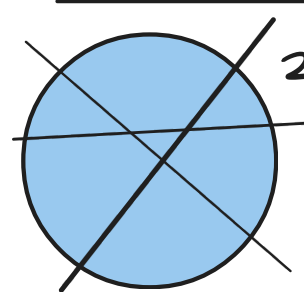
$$2\pi r(r+h)$$

Baker's Partition Problem

(cake) 2D



Max Regions in a Plane



2D (Circle)

$$\left(\frac{n \times (n+1)}{2} + 1 \right)$$

No of Cuts	Max Pieces	No of straight lines	Max Regions
$S(n)+1$ 0	1	$S(n)+1$ 0	1
1	2	1	2
2	4	2	4
3	7	3	7
4	11	4	11
5	16	5	16

int hammingWeight (int n) { ⇒ Hamming Weight

{ bin } (11 not bin)
11 → 101x
n >> 1
1011 >> 1
101
001
001
10
01
00
T.C.O
10 >> 1
1 >> 1
1
0 (stop)
11 → 1011 → 3
5 → 0101 → 2
0 → 0000 → 0
(LeetCode) (191)
count = 0, 1, 2, 3
++
++
++

$$8 \Rightarrow \begin{array}{r} 1000 \\ 0001 \\ \hline 0000 \end{array}$$

$$8 \gg 1 \begin{array}{r} 100 \\ 001 \\ \hline 000 \end{array}$$

$$\text{count} = 0 \text{ (1)} \quad ++$$

DRY RUN

$$100 \gg 1 \begin{array}{r} 10 \\ 01 \\ \hline 00 \end{array}$$

$$10 \gg 1 \begin{array}{r} 1 \\ 1 \\ \hline 1 \end{array}$$

$$1 \gg 1 \begin{array}{r} 0 \\ \hline \text{stop} \end{array}$$