

## Incrementation and Decrementation

$\text{int } a = 5;$   $a$  5  
 $\downarrow$   
 $a = a + 1;$   $a++;$   $\rightarrow$   
 $\uparrow$   
 $5+1$   
 $6$   
 $\{ a = a - 1; \}$   $a--;$   $\rightarrow$   
 $\downarrow$   
 $6-1$   
 $5$

Post-Incre	VarName++	a++	Post Decr	VarName--	a--
Pre-Incre	++VarName	++a	Pre Decr	--VarName	--a

$\text{int } a = 5;$   $a$  5  
 $\downarrow$   
 $a++;$   
 $++a;$

$\text{int } a = 5;$   $a$  5  
 $\downarrow$   
 $\text{int } b = a++;$

$\text{S.o.p}(a);$  6  
 $\text{S.o.p}(b);$  5

$\text{int } a = 5;$   $a$  5  
 $\downarrow$   
 $\text{int } b = ++a;$

$\text{S.o.p}(a);$  6  
 $\text{S.o.p}(b);$  6

$\text{int } a = 5;$   $a$  5  
 $\downarrow$   
 $\text{int } b = a++ + ++a + --a;$

$\text{S.o.p}(a);$  6  
 $\text{S.o.p}(b);$  18

$\Rightarrow$  `int a = 5;`  $\Delta 5$  `a` ~~5~~ ~~6~~ ~~7~~ ~~8~~ ~~9~~ ~~8~~  $\Delta 7$

`int b;`  $\Delta 0$  `b`  $\Delta 0$   
`b = 5`  $\Delta 5$  `a++`  $\Delta 1$  `++a`  $\Delta 2$  `++a`  $\Delta 3$  `++a`  $\Delta 4$  `++a`  $\Delta 5$  `++a`  $\Delta 6$  `++a`  $\Delta 7$  `--a`  $\Delta 6$  `a--`  $\Delta 5$   $\Delta 4$

`s.op(a);`  $\Delta 7$   
`s.op(b);`  $\Delta 4$