TYPE CASTING (Local Conversion)

```
#include <stdio.h>
#include <conio.h>
void main()
{
   int a,b;
   float c;
   clrscr();
   printf("Enter 2 int:");
   scanf("%d %d",&a,&b);

   c=(float)a/b; → can also be c = a/(float)b;

   printf("Div is %f",c);

   getch();
}
```

```
X c = a / b;

c = (float) a / b;
OR
c = a / (float)b;
```

Type Casting
or
Local Conv

① (data type) var

② (data type) const

③ (data type) expr

Type Casting Of Constant

avg = sum / (float) 3;

Type Casting Of Expr

avg = (float) (a+b+c)/3 ;

Type Casting Of "float" To "int"

```
#include <stdio.h>
#include <conio.h>
void main()
{
   float a,b;
   int c;
   clrscr();
   printf("Enter 2 float:");
   scanf("%f %f",&a,&b);
                5.9       2.6
① c=(int)a%(int)b;
          5%2
   printf("Rem is %d",c);

   getch();
}
```

Type Conversion

①

```
int a;

a = 2.3;

printf("%d",a);
        ②
```

Type Conversion

```
a = b;
```

②

```
float a;

a = 4;

printf("%f",a);
   4.000000
```

Type Conversion

Type Casting	V/s	Type Conv
① Explicit		① Implicit
② Temporary		② Permanent
③ May or May not use =		③ Always done using =

① int a;

a = 10/4;

(No TC)

② float a;

a = 10/4.

(TC is done)

float ← int

③ int a;

a = 10/4.0.

(TC is done')

int ← double

④ float a;

a = 10/4.0;

(TC is done)

float ← double

Different Types Of Constants In Turbo Compiler

① 10 —> int —> 2 B
const

② 'A' —> char —> 1 B
const

③ 1.7 —> double —> 8B
const

④ 1.7f
1.7F] —> float —> 4B
const

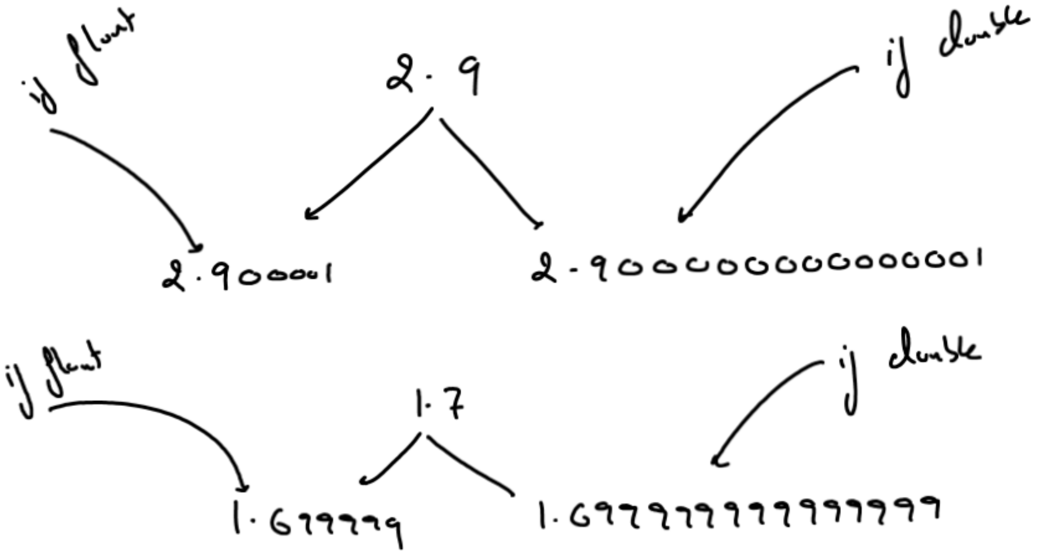
This is double

```
float ar;
:
:
ar = 3.14 * rad * rad;
ar = 3.14f * rad * rad;
```

This also is float

```
int rad; . . .
float pi = 3.14;
float ar;
:
ar = pi * rad * rad;
```

This is float



① float a;

a = 3.6;] TC is done

② double a;

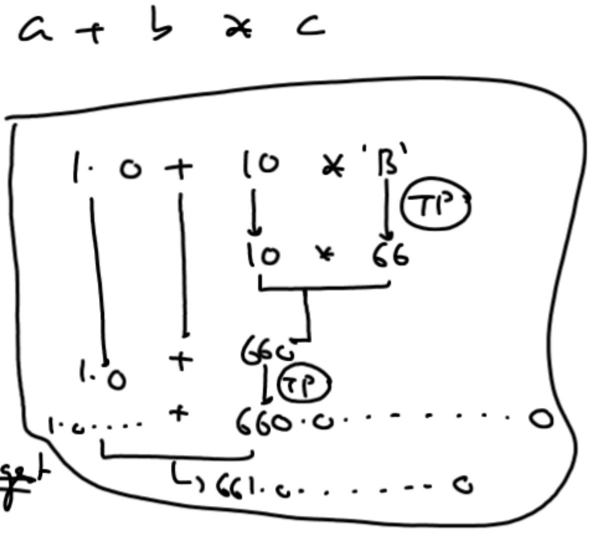
a = 3.6;

③ float a;

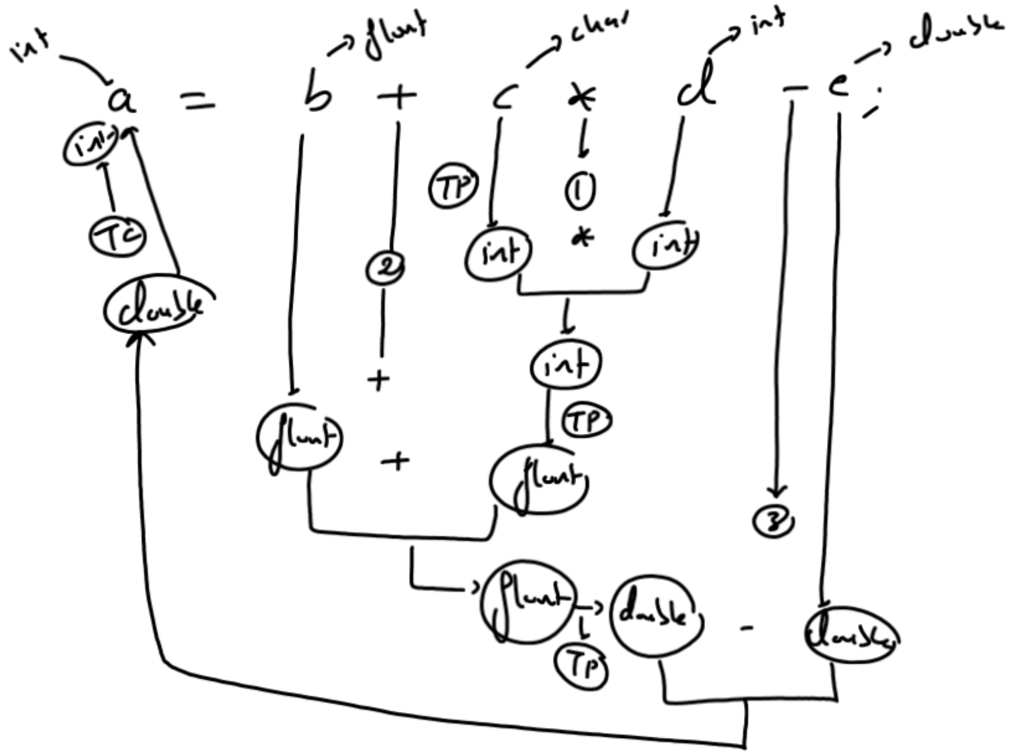
a= 3.6f;] No TC is done

Type Promotion

1. signed char ← Smallest
2. unsigned char
3. signed int
4. unsigned int
5. long int
6. unsigned long int
7. float
8. double
9. long double ← Largest



a + b * c
1.0 + 10 * 'B'
TP
10 * 66
660
1.0 + 660
TP
1.0..... + 660.0.........0
661.0.......0



int
a = b + c * d - e ;
float
char
int
double
int
TC
double
TP
1
*
int
int
2
int
+
TP
float
+
float
3
float
double
TP
-
double