

Pointers

↳ Dynamic address

→ How to define it?

```
int *y = &x;
```

↑ نوع المتغير
↑ الموقع الذي
تؤشر عليه



Notes:
if a is a pointer and x is a variable
Then you can't say x = a
but you can say a = &x

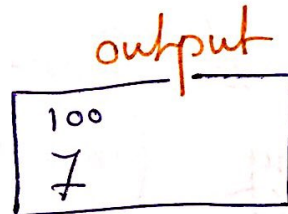
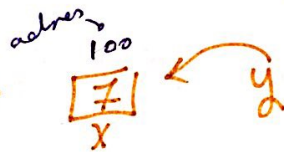
→ What is the Output?

If you have a pointer *y =

→ `printf("%d", y);` → it prints the address that y is pointing to it.

→ `printf("%d", *y);` → it prints the value inside the address

```
Ex int x = 7;
    *y = &x;
```



```
printf("%d", y);
printf("%d", *y);
```

→ How to use pointers in functions?

Remember that a function can return one value only
But we can use pointers to return more than one value from a function.

How?

first

The function should be void / Example: function to calculate sum/multiplication/division & subtraction
Void ops (int, int, int*, int*, int*, int*)

You can add

As many As you want

Second:-

When Calling the function :-

ops (x, y, &sum, &mul, &div, &sub)

Third:-

In the function itself :-

```
ops (int a, int b, int *d, int *s, int *f, int *e)
{
    *d = a + b;
    *s = a * b;
    *f = a / b;
    *e = a - b;
}
```

Note

When it comes to printing
let's say we have

when you have many functions
2 functions : sum and sub

```
Z = sum (x, y, &---);
printf ("%d\n", Z, x);
```

```
E = sub (M, F, &---);
printf ("%d\n", M, F, &---);
```

you work out Z
if there is another
print in the function
it comes first
— Then This

same

lastely this

Global vs local variables

- If you define a variable before main function. it's a Global variable

```
Ex #include _____
    int x=5
    {
    }
    int main( )
```

- in functions, if there is a variable same as a global variable then :-

```
int one (int b)
```

```
{
  int x
```

```
  x=10;
```

• لو كانت متش موجودة
لنقع فوقه global
← متش اوله و آخره →

You take this value
But if it didn't say its value
then you take x=5