

# C ptrs / C arrays / C strings

...

```
int main() {
```

```
    int a = 12;
```

```
    int *k;
```

declaration \*

"address of"

```
    x = &a;
```

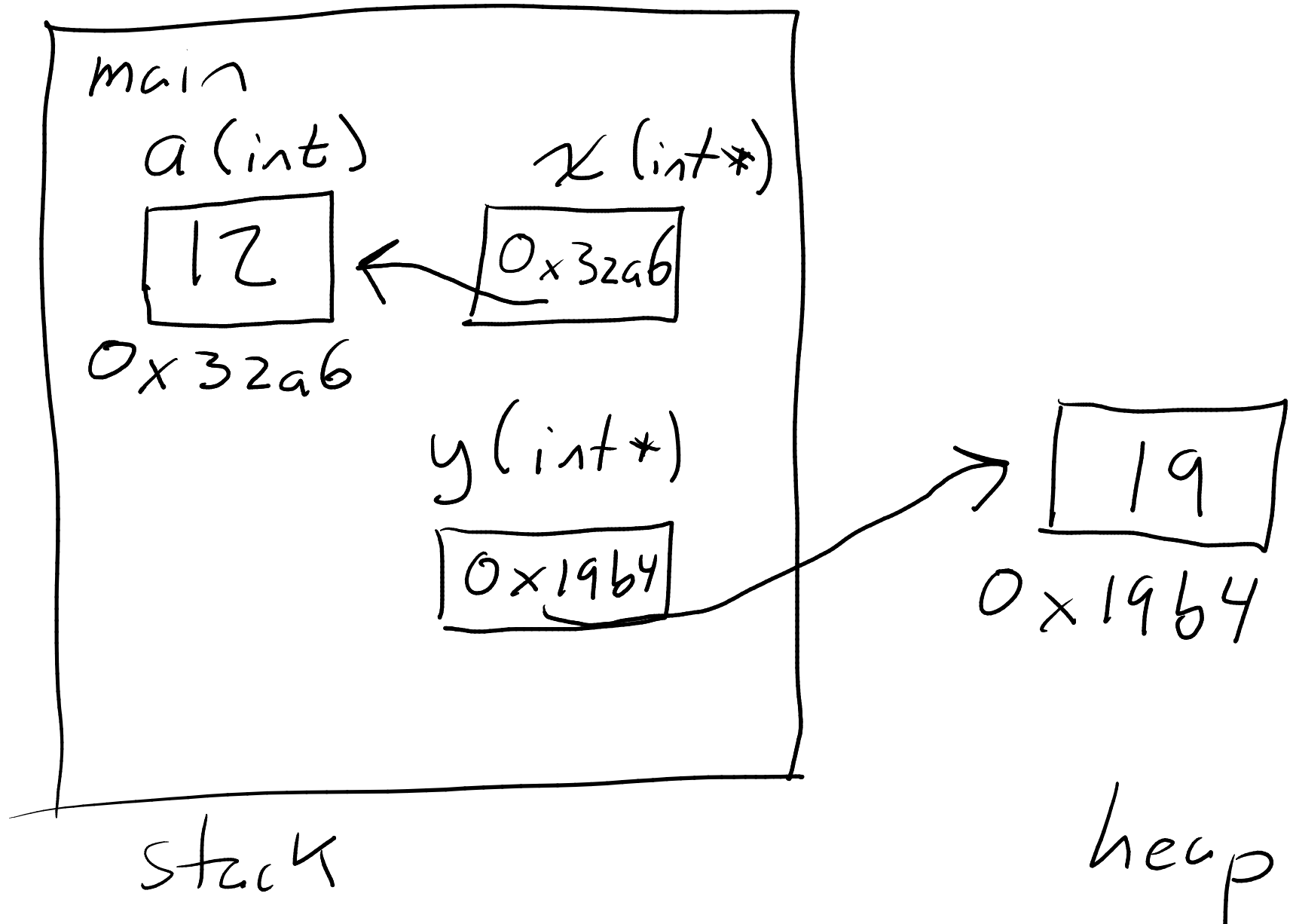
```
    int *y;
```

```
    y = malloc(sizeof(int));
```

```
    *y = 19;
```

waterslide\* (follow the ptr)

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# Array program

(Why do we want flexibility  
to store in stack vs heap?)

main

a

0	1	2
0	1	2

0x34 0x38 0x3c  
(34) (38) (42)

b

0	1	2
0	1	2

c(int\*)



d(int\*)



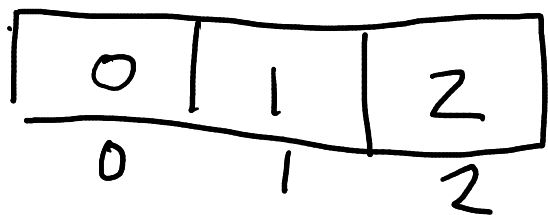
8	9	10
0	1	2

Stack

heap

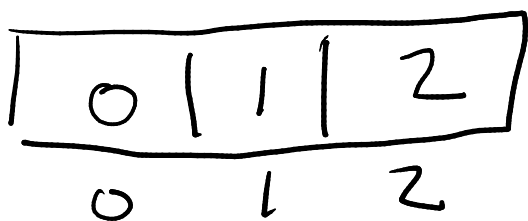
main

a



0x34 0x38 0x3c  
(34) (38) (42)

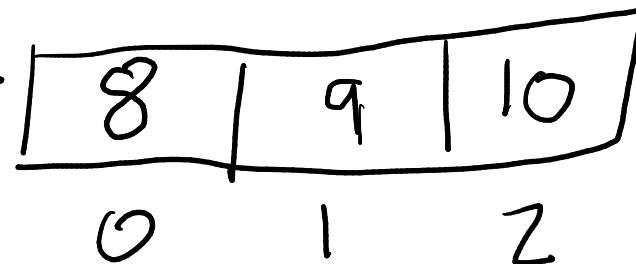
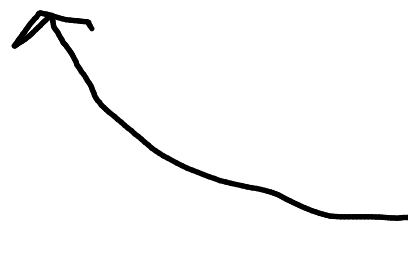
b



c(int\*)



d(int\*\*)



int \*\*d;  
d = &c;