rcast

(int *) malloc (12)

cast
↳ to an int pointer

12 bytes
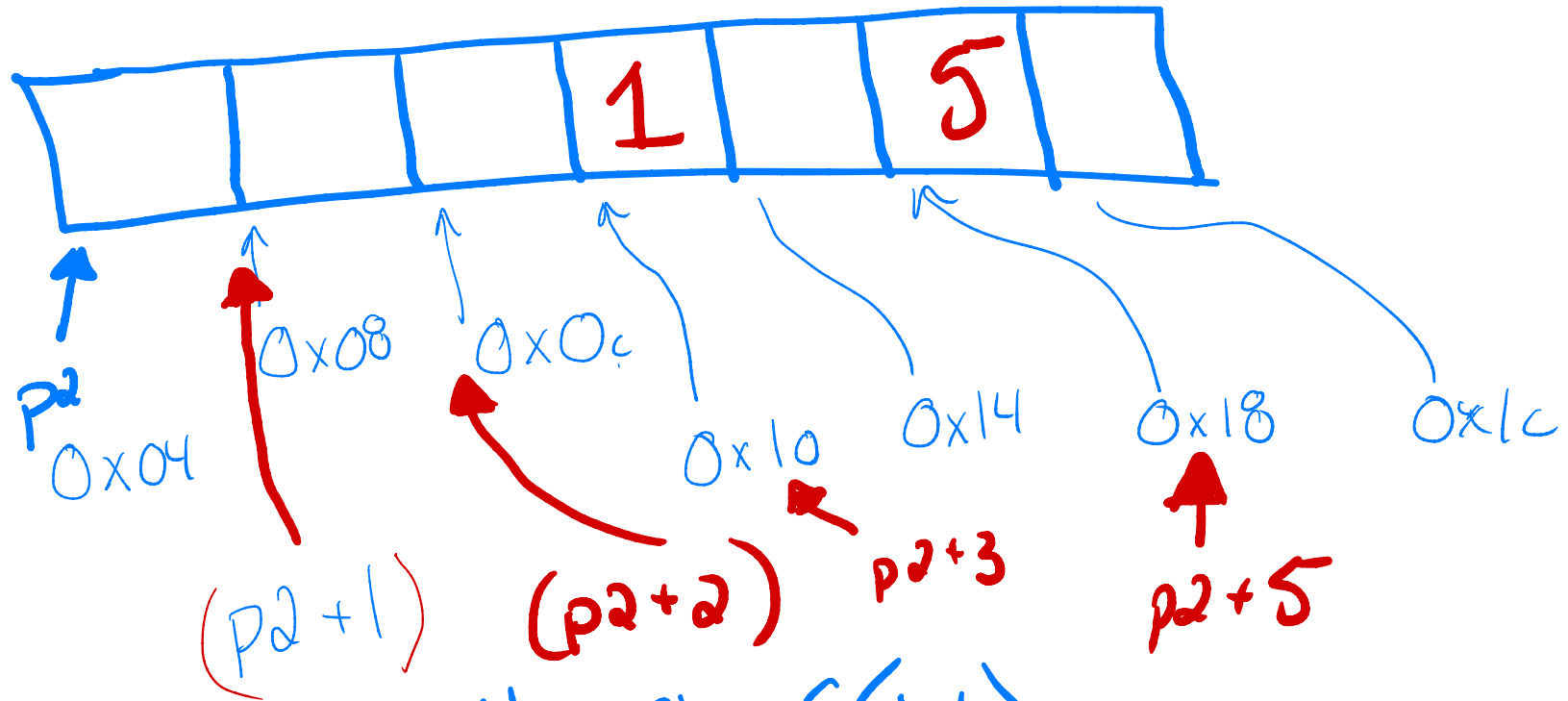
contiguous

int x=5;

double y = (double) x;

| 4 bytes | -- | 4 bytes | -- | 4/6 |
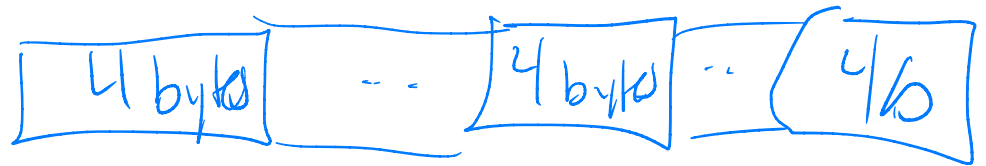
↳ won't happen
know that it's contiguous

$$p2 = (int \ast) \ malloc(7 \ast sizeof(int));$$

$p2$

$0x04$

$(p2+1)$

$0x08$

$(p2+2)$

$0x0c$

$p2+3$

$0x10$

$0x14$

$p2+5$

$0x18$

$0x1c$

$4 = sizeof(int)$

let's assume

$$\ast(p2+5) = 5$$

$$\ast(p2+3) = 1$$

int *p4 = (int *) malloc(4 * sizeof(int))
int * p5 = (int *) malloc(5 * size of (int))

10

80

q

p4

12 bytes

p5's 20 bytes

realloc uninitialized

copy

p5

p4's 16 bytes

512 bytes on system
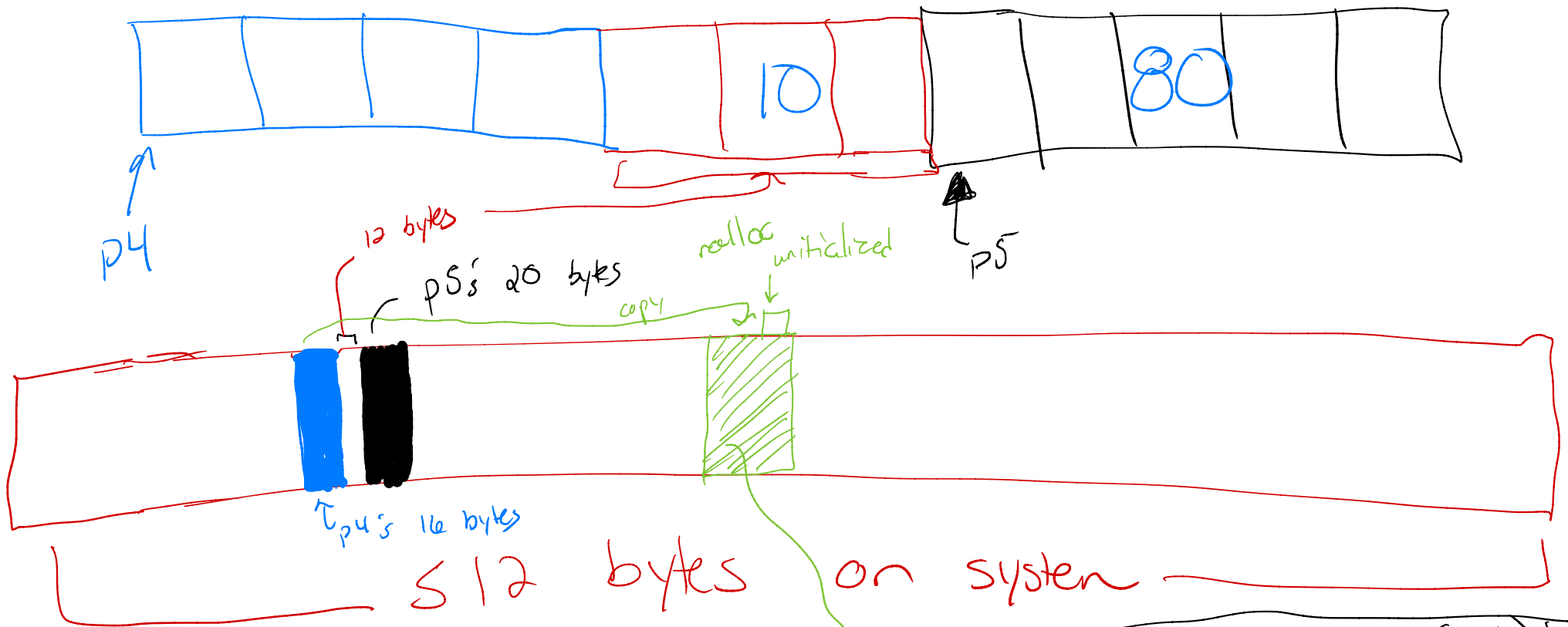
$*(p4 + 9) = 80$

$*(p4 + 5) = 10$

realloc(p4, 10 * sizeof(int))