CSCI 2330 – Pointer Exercises
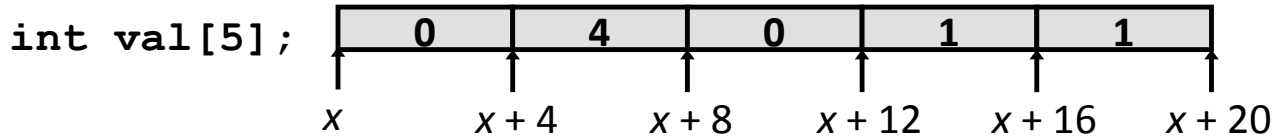
Consider the array shown below with the specified **int** contents, which starts at memory address x. For each expression given below, give the **type** of the expression (e.g., **int** or **int***) as well as its **value** (which may be in terms of x). Assume a little-endian machine with 1 byte chars, 4 byte ints, and 8 byte longs.

```
int val[5];
```

0	4	0	1	1

x   x + 4   x + 8   x + 12   x + 16   x + 20

Example Expression: **(5 + 3)**
    Type: int
    Value: 8

1. val[4]

2. val

3. val + 1

4. &val[2]

5. *(val + 2)

6. val + i   (for some integer **i**)

7. val[5]

8. *((char*) val)   (casting val to char* before dereferencing it)

9. *((long*) val)   (hint: remember endianness)