

1.
 - 1.1 True
 - 1.2 ...
 - 1.3 ...
 - 1.4 ...
2.
 - 2.1
 - 0xF9320904
 - 0xF93209AC
 - 0x2A
 - 2.2
 - (a) calculate the sum of ~~all the elements~~ (first n elements) in arr
 - (b) sum = - (the number of zeros in arr)
 - (c) ~~swap the value of x and y~~ (Ultimately does not change the value of either x or y.)
 - (d) $\sim(x \wedge y)$
 also: $x \& y \mid \sim (x \mid y)$
 $x == y$

3. 3.1

- (a)

```
void swap(int *a, int *b) {
    int temp = *a;
    *a = *b;
    *b = temp;
}
```
- (b)

```
int mystrlen(char* a) {
    int ret = 0;
    while (*a != '\0') {
        ret++;
        a++;
    }
    return ret;
}
```

3.2

- (a) sizeof(summands) is incorrect, use an extra argument to pass the size of summands
- (b) Can't understand the question.

- (c) if the memory of dst is less than src, it will cause an error.
multi suffix ++ (or prefix) should not be in one line, it's confusing and will easily cause trouble.
- (d) line 5 is wrong: replaceptr is of type "char", not "char *"

4. 4.1

- (a) static
- (b) stack
- (c) static(maybe) **Right!**
- (d) static (**Code, static, or stack**)
- (e) code
- (f) heap
- (g) static **or stack**

4.2

- (a) `int* arr = (int *) calloc (k, sizeof(int));`
- (b) `str = (char*) malloc ((p + 1) * sizeof(char))`
- (c) `int **a = (int**) malloc (n * sizeof(int*));`
`for (int i = 0; i < n; ++i) {`
`a[i] = (int*) calloc (m, sizeof(int));`
`}`

4.3

line 8 and line 9 both have problems.

line 8: if the length of input is less than 11, important_stuff will be assigned rubbish value

line 9: `"\0"` is actually `'\0'` and `'\0'`, not a character.

4.4

```
void prepend(struct ll_node** lst, int value) {
    struct ll_node* st = (struct ll_node*) malloc (sizeof(struct ll_node));
    st -> next = *lst;
    st -> value = value;
    *ll_node = st;
}
```

reason for double * :omitted

4.5

```
while (*lst != NULL) {  
    struct ll_node* temp = (struct ll_node*) malloc (sizeof(struct ll_node));  
    *lst = (*lst) -> next;  
    free(temp);  
}
```