

CS 145 Day 8 activity – tracing loops

For each problem, fill in one row per pass through the loop, then write what the code returns or prints. Use a dash if a variable has no value yet.

1. Trace `count_e("eel")` for each version.

Version A

```
def count_e(word):
    total = 0
    for ch in word:
        if ch == "e":
            total += 1
    return total
```

ch	total
<i>before loop</i>	

Returns: _____

Version B

```
def count_e(word):
    for ch in word:
        total = 0
        if ch == "e":
            total += 1
    return total
```

ch	total
<i>before loop</i>	

Returns: _____

2. Trace `doubles([3, 1, 4])`.

```
def doubles(nums):
    result = []
    for num in nums:
        if num > 2:
            result.append(num * 2)
    return result
```

num	num > 2	result
<i>before loop</i>		

Returns: _____

3. Trace this code.

```
nums = [4, 7, 1]
for i in range(len(nums)):
    nums[i] = nums[i] + i
print(nums)
```

i	nums[i] + i	nums
<i>before loop</i>		

Prints: _____