

CSCI 2021

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```
unsigned prob2(unsigned n, unsigned m)
{
    unsigned result;
    while (m < n) {
        if ((n & 1) == 0) {
            result = 2 * m + 1;
            m = m + 3;
            n = n << 2;
        }
        else {
            result = 3 * n + 7;
            m = m + 6;
            n = n << 1;
        }
    }
    return result;
}
```

2.

A. 38: If only something would happen...
42: do something 2 did something!

for 38: do-something1 pass a value to the function, and after go out the scope the content of ~~fun~~ doesn't change so the value should be the original one

for 42: the do-something2 return an address and the point is assigned to that address, so it should have the value in do-something2.

B. change the bar to a static variable, which is static bar & bar.

C. 34 for first one
64 for second one



D. 88

E. address value.

2-44	0
2-48	560426601
2-56	7526752397938597988
...	
2-64	759423027250924164
...	
2-72	8387230206491848548
...	
2-96	%ora x

3.

```

void hw2_switch (long *value, long x, long m) {
    long result;
    switch (m) {
        case 1:
            result = 2 * x + *value;
            break;
        case 2:
        case 7:
            result = (6 * x) << 7;
            break;
        case 4:
            result = 20 + x;
        case 6:
            result = 6 * x + *value;
        default:
            result = x + 7;
    }
    *value = result;
}

```



4.

A. `int fun-time (char a[], int b)`

```
if ( b == 0 )  
    return 0;
```

```
int result = 0;  
int i = 0;  
while ( i < b )  
{  
    result += a[i];  
    i++;  
}
```

```
return ( fun-time ( a, b-1 ) + result );
```

B. 3
32

C. line 60 % eax.

E. `mat`
└
 `&mat[r][0]`
 `&mat[r-1][0]`
 └-1
 c-1

