Worksheet 1

Your name:
Collaborators:

Given the following functions:

```
void foo1 (int a)
{
     a = a + 2;
}

void foo2 (int *a)
{
     *a = *a + 2;
}
```

Can you determine the stored value of the variable(s) in question after executing the given code? If so, what is it? If not, why not?

1.

```
int b = 2;
foo1(b)
```

What is b?

B is 2

2.

```
int b = 2;
foo2(&b)
```

What is b?

B is 4

3.

```
int b = 2;
foo1(&b)
```

What is b?

B is 2

4.

```
int b = 2;
foo2(b)
```

What is b?

Most likely 2, unless b happens to have the address 2, in which case it's 4. (Note: this code may not actually compile because of a type mismatch)

5.

```
int b = 2;
int *c;
c = &b;
foo2(c)
```

What is b? What is c?

B is 4. C is the address of b.

6.

```
int b = 2;
int *c;
c = &b;
*c = 4;
foo2(&b)
foo2(c)
```

What is b? What is c? What is *c?

B is 8. C is the address of b. *c is also 8.

7.

```
int b = 2;
int c = 8;
int *d;
d = &b;
foo2(d)
*d = c;
d = &c;
foo2(d)
```

What is b? What is c? What is d? What is *d?

B is 8. C is 10. D is the address of C. *d is 10.