

Exercises 5.1

Learn C With Babbo

1. Give the output of the following blocks of code:

(a)

```
if (3 > -2) {  
    printf('0\n');  
} else {  
    printf('1\n');  
}
```

(b)

```
int a = 18;  
if (a < 10) {  
    printf("0\n");  
} else if (a < 20) {  
    printf("1\n");  
} else if (a < 30) {  
    printf("2\n");  
} else {  
    printf("3\n");  
}
```

(c)

```
int b = -7  
if (b < 0) {  
    printf("0\n");  
} else if (b == -7) {  
    printf("1\n");  
}
```

(d)

```
int a = 90;  
if (a > 200) {  
    printf("0\n");  
} else if (a > 90) {  
    printf("1\n");  
} else {  
    printf("2\n");  
}
```

(e)

```
int a = 50;
if (a - 20 > 20) {
    printf("0\n");
}
if (a % 51 >= 50) {
    printf("1\n");
}
if (a * 9 != 500) {
    printf("2\n");
}
```

(f)

```
int a = 35;
int b = 8;
printf("%d\n", 2 * (a % 3 == 2) + 5 * (b / 3 > 1)
        - 6 * (a - b * 4 < 0));
```

2. (a) Write a function called `is_even` that takes an `int` as an argument and returns 0 if that `int` is odd, and 1 if that `int` is even.
- (b) Given your function definition above, give the output of the following code block:

```
int a = 4;
int b = 9;
if (is_even(a + b)) {
    printf("Even\n");
} else {
    printf("Odd\n");
}
```

3. What is wrong with the following code block?

```
int a = 9;
if (a * 3 = 27) {
    printf("0\n");
} else {
    printf("1\n");
}
```