

# Round Down

[Here is a video walkthrough of the solutions.](#)

Given some power of two `powerOfTwo` and a positive number `num`, round `num` down to the nearest multiple of `powerOfTwo`. Assume `powerOfTwo` is greater than or equal to 1. You may use only bit operations and one subtraction/addition operation.

Examples:

```
1 roundDown(8, 53) -> 48
2 roundDown(16, 90) -> 80
3 roundDown(1, 90) -> 90
```

```
1 public int roundDown(int powerOfTwo, int num) {
2
3     return _____;
4 }
```

**Solution:**

```
1 public int roundDown(int powerOfTwo, int num) {
2     return ~(powerOfTwo - 1) & num;
3 }
```