

- **Warmup:** In IntelliJ, fill in the **fact** function that takes a single int argument (num) and returns the product of all the integers between 1 and num.
  - Use a **for** loop.
  - Test in main when you're done.
- (This is actually a useful function in science and mathematics, called the factorial function.)
- Compare with your neighbor to see if you did it the same way.



- **Warmup:** In IntelliJ, fill in the fact function that takes a single int argument (num) and returns the product of all the integers between 1 and num.
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```
public static long fact(int num) {  
    long answer = 1;  
    for (int i = 1; i <= n; i++) {  
        answer *= x;  
    }  
    return answer;  
}
```

- Let's look at this problem a different way:
- $\text{fact}(1) = 1$
- $\text{fact}(2) = 1 * 2$
- $\text{fact}(3) = 1 * 2 * 3$
- $\text{fact}(4) = 1 * 2 * 3 * 4$
- $\text{fact}(5) = 1 * 2 * 3 * 4 * 5$
- Notice that each product involves computing the entire product on the row above.

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