Exercise1:

(a)
There are 2 arithmetic operations in the *for* loop. For *fact(5)*, $n = 5$, the *for* loop will run 4 times until $i <= 5$. Hence the number of arithmetic operations required to compute *fact(5)* is $4 * 2 = 8$.
8 arithmetic operations are required to compute *fact(5)*.

(b)
For *fact(n)*, the loop will run a total of $n - 1$ times. So, the number of arithmetic operations required to compute *fact(n)* for any positive integer *n* is $2n$.