

1)

Text answer Consider the following program for computing factorial numbers:

```
1 long fact(int n) {  
2     // precondition:  
3     assert(n >= 0);  
4     long f = 1;  
5     for (long i = 1; i <= n; ++i) {  
6         f = i * f;  
7     }  
8     return f;  
9 }
```

Provide your answers to the following questions in a plain text file:

- (a) How many arithmetic operations (+, -, *, /) are required to compute fact(5)?
- (b) How many arithmetic operations (+, -, *, /) are required to compute fact(n) for any positive integer n ?

a) Det kræver 10 operations at udregne fact(5)

b) Et generelt udtryk fact(n) er $2n$