Exercises

1)

Text answer Consider the following program for computing factorial numbers:

```
long fact(int n) {
  // precondition:
  assert(n >= 0);
  long f = 1;
  for (long i = 1; i <= n; ++i) {
    f = i * f;
  }
  return f;
}
```

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) Der er to aritmetiske operationer hver gang loop kører, så derfor må der være 10 aritmetiske operationer for at compute fact(5).

b) Der kræves 2 aritmetiske operationer for fact(2n).