

# Debugging your programs

- RUNTIME-ERROR supersedes WRONG-ANSWER
- For C++ and memory corruption: Valgrind
- Generating completely random input can be faster than waiting for us to answer
  - ... do not only write tests by hand, write a generator
- Shortest possible input?
- If you get TIMELIMIT, look at your program and try constructing its worst input
- Small function mean less variables in scope (more mistakes become compile-time errors)
  - ... and small functions can be tested separately
- We may omit the very worst test cases — so if optimisation is useful *almost* always, use it
- If something is formally allowed to be zero, we might have such a case