

T-79.192 Special Course in Theoretical Computer Science, 2001
Home assignment 5

return date: Thu Nov 1

Use Shor's algorithm (course book Table 6.4, pp. 136-137) to factor number 21. Show the contents of *reg1* and *reg2* for each step.

In step 4e, you don't need to list all the probability amplitudes in your answer. Just give a few c , along with their amplitudes, which are the most probable measurement results.

In steps 4g and 5, computation of gcd and continued fractions need not be shown, just the results. If you are using Mathematica, functions `GCD` and `ContinuedFraction` might be useful.