

Paper questions

Application of discrete models

These question types can be in the paper part of the test (but not necessarily the exact same questions.) The exercises are to be solved on paper with pen, without any other tool.

1.1. Perform the following divisions with remainder (i.e. calculate the quotient and the remainder):

a) 36 by 10, b) 50 by 8, c) 80 by 12, d) 112 by 7, e) 1000 by 90.

1.2. List all positive divisors of 40.

1.3. List all prime numbers up to 20.

1.4. Decide whether these numbers are prime:

a) 21, b) 23, c) 37, d) 81, e) 91, f) 777, g) 4978135216.

1.5. Calculate the prime factorization (canonical representation) of the following numbers:

a) 30, b) 36, c) 37, d) 64, e) 120, f) 150, g) 200, h) 3000.

(Extended each week...)