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|---|---|
| **Started on** | Wednesday, 11 September 2024, 12:16 PM |
| **State** | Finished |
| **Completed on** | Wednesday, 11 September 2024, 12:38 PM |
| **Time taken** | 22 mins 26 secs |
| **Marks** | 0.00/3.00 |
| **Grade** | **0.00** out of 3.00 (**0.03**%) |

Information

# Information

This page contains all the problems for this test. The very last problem asks you to contact the person in charge of the exam and tell him or her the 4-digit key given in the problem text. In return you will be given a 5-digit signing code which you must give as the answer to the problem.

This problem does not count towards the final score, but **tests missing this code will not count towards the final grade**.

The following rules apply:

- Total time allowed: 30 minutes. The test will automatically close if time runs out.
- UiA's usual rules in regards to cheating on exams apply.

Question **1**

Incorrect

Mark 0.00 out of 1.00

What is the contraposition of the following formula?

$$(\neg p \Rightarrow q) \implies (\neg s \Rightarrow t)$$

Hints:
$\neg(A \wedge B) = \neg A \vee \neg B$
$\neg(A \vee B) = \neg A \wedge \neg B$
$A \implies B = \neg A \vee B$

Select the precedent and the antecedent of the implication.

p ∨ ¬ q ⟹ s ∨ ¬ t

Question **2**

Incorrect

Mark 0.00 out of 1.00

Compute the prime factorizations of the following natural numbers.

Write the answer in the following form:

$$p_1^{e_1} \cdot p_2^{e_2} \cdot \ldots p_n^{e_n}$$

where $p_i$ is a prime and $e_i$ is a natural number. All the primes $p_i$ must be distinct.

| number | prime factors |
|---|---|
| $4410$ | 2*10^3*2*2^1*2*2^5<br>Your last answer was interpreted as follows:<br>$2 \cdot 10^3 \cdot 2 \cdot 2^1 \cdot 2 \cdot 2^5$ |
| $1176$ | 2*10^3*2*10^2*2*2^2<br>Your last answer was interpreted as follows:<br>$2 \cdot 10^3 \cdot 2 \cdot 10^2 \cdot 2 \cdot 2^2$ |
| $616$ | 2*10*10*6<br>Your last answer was interpreted as follows:<br>$2 \cdot 10 \cdot 10 \cdot 6$ |

Question **3**

Incorrect

Mark 0.00 out of 1.00

Consider the following EBNF grammar.
Bug → tie { Jay | pen } | hut Cat
Jay → bag [ Bug ] { map | Jay }+
Cat → Bug hat Jay

Translate it into a grammar 4-tuple.
You must fill in something in each field to get a marking.

Terminals = 0

Nonterminals = 1

Start symbol = 1

Rules = 0

Your last answer was interpreted as follows:

$$0$$

Your last answer was interpreted as follows:

$$1$$

Your last answer was interpreted as follows:

$$1$$

Your last answer was interpreted as follows:

$$0$$

Question **4**

Correct

Mark 0.00 out of 0.00

# Signing code

Before closing the test you must answer this problem with a signing code given to you by the person in charge of the test.

Tests missing this signing code will be ignored and will not count towards the final score.

Key: $158$

Signing code: 24963

Your last answer was interpreted as follows:

$$24963$$

◄ Technical test

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