Started on	Wednesday, 11 September 2024, 2:32 PM
State	Finished
Completed on	Wednesday, 11 September 2024, 2:49 PM
Time taken	17 mins 52 secs
Marks	0.83/3.00
Grade	**0.83** out of 3.00 (**27.8**%)

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**

Partially correct

Mark 0.50 out of 1.00

Consider the set

$$\{4, 7, \{4, 7\}, \{7\}, \{\{4\}\}, \{\{7\}\}\}.$$

Mark all true statements.

- [x] $\{4\} \subseteq S$
- [ ] $\{7\} \in S$
- [ ] $\{\{4\}\} \subseteq S$
- [ ] $\{4\} \in S$
- [ ] $4 \subseteq S$
- [x] $7 \subseteq S$
- [ ] $\{\{7\}\} \subseteq S$
- [x] $4 \in S$
- [x] $7 \in S$
- [x] $\{7\} \subseteq S$
- [ ] None of the above

Question **2**

Partially correct

Mark 0.33 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
540	2^2*5*27 Your last answer was interpreted as follows: $2^2 \cdot 5 \cdot 27$
540	2^2*5*27 Your last answer was interpreted as follows: $2^2 \cdot 5 \cdot 27$
901	17*53 Your last answer was interpreted as follows: $17 \cdot 53$

Question **3**

Not answered

Marked out of 1.00

Consider the following EBNF grammar.
T → U | T ^ T | ε
U → H | H ! U | ε
H → q | m | f | t | g | a

Find a derivation for the following string: t ! q ^ q ! a.

The derivation is given as a sequence of strings.

["X","XQX","1QX","1?X","1?2"]

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: 179

Signing code: 46602

Your last answer was interpreted as follows:

46602

◄ Technical test

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