# OpenGeoProver Output for conjecture "geothm_zadatak"

Wu's method used

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## 1 Invoking the theorem prover

The used proving method is Wu's method.
The input system is:

$$
\begin{aligned}
p_1 &= 2x_1 - \\
p_2 &= 2x_2 - \\
p_3 &= 2x_4 - x_1 \\
p_4 &= 2x_5 - x_2 \\
p_5 &= 2x_6 - x_3 \\
p_6 &= 2x_7 - x_1 - \\
p_7 &= 2x_8 - x_2 \\
p_8 &= 2x_9 - x_3 \\
p_9 &= 2x_{10} - x_1 - \\
p_{10} &= 2x_{11} - x_2 - \\
p_{11} &= 2x_{12} - x_3 \\
p_{12} &= 2x_{13} - x_1 \\
p_{13} &= 2x_{14} - x_2 - \\
p_{14} &= 2x_{15} - x_3 \\
p_{15} &= x_{16} - x_{12}x_8 + x_{12}x_5 + x_{11}x_9 - x_{11}x_6 - x_9x_5 + x_8x_6 \\
p_{16} &= x_{17} + x_{12}x_7 - x_{12}x_4 - x_{10}x_9 + x_{10}x_6 + x_9x_4 - x_7x_6 \\
p_{17} &= x_{18} - x_{11}x_7 + x_{11}x_4 + x_{10}x_8 - x_{10}x_5 - x_8x_4 + x_7x_5 \\
p_{18} &= x_{19} + x_{18}x_6 + x_{17}x_5 + x_{16}x_4 \\
p_{19} &= x_{20} -
\end{aligned}
$$

### 1.1 Triangulation, step 1

**Choosing variable:** Trying the variable with index 19.

**Variable $x_{19}$ selected:** The number of polynomials with this variable, with indexes from 1 to 19, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{18}$. No reduction needed.

The triangular system has not been changed.

## 1.2 Triangulation, step 2

**Choosing variable:** Trying the variable with index 18.

**Variable $x_{18}$ selected:** The number of polynomials with this variable, with indexes from 1 to 18, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{17}$. No reduction needed.

The triangular system has not been changed.

## 1.3 Triangulation, step 3

**Choosing variable:** Trying the variable with index 17.

**Variable $x_{17}$ selected:** The number of polynomials with this variable, with indexes from 1 to 17, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{16}$. No reduction needed.

The triangular system has not been changed.

## 1.4 Triangulation, step 4

**Choosing variable:** Trying the variable with index 16.

**Variable $x_{16}$ selected:** The number of polynomials with this variable, with indexes from 1 to 16, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{15}$. No reduction needed.

The triangular system has not been changed.

## 1.5 Triangulation, step 5

**Choosing variable:** Trying the variable with index 15.

**Variable $x_{15}$ selected:** The number of polynomials with this variable, with indexes from 1 to 15, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{14}$. No reduction needed.

The triangular system has not been changed.

## 1.6 Triangulation, step 6

**Choosing variable:** Trying the variable with index 14.

**Variable $x_{14}$ selected:** The number of polynomials with this variable, with indexes from 1 to 14, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{13}$. No reduction needed.

The triangular system has not been changed.

## 1.7 Triangulation, step 7

**Choosing variable:** Trying the variable with index 13.

**Variable $x_{13}$ selected:** The number of polynomials with this variable, with indexes from 1 to 13, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{12}$. No reduction needed.

The triangular system has not been changed.

## 1.8 Triangulation, step 8

**Choosing variable:** Trying the variable with index 12.

**Variable $x_{12}$ selected:** The number of polynomials with this variable, with indexes from 1 to 12, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{11}$. No reduction needed.

The triangular system has not been changed.

## 1.9 Triangulation, step 9

**Choosing variable:** Trying the variable with index 11.

**Variable $x_{11}$ selected:** The number of polynomials with this variable, with indexes from 1 to 11, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_{10}$. No reduction needed.

The triangular system has not been changed.

## 1.10 Triangulation, step 10

**Choosing variable:** Trying the variable with index 10.

**Variable $x_{10}$ selected:** The number of polynomials with this variable, with indexes from 1 to 10, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_9$. No reduction needed.

The triangular system has not been changed.

## 1.11 Triangulation, step 11

**Choosing variable:** Trying the variable with index 9.

**Variable $x_9$ selected:** The number of polynomials with this variable, with indexes from 1 to 9, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_8$. No reduction needed.

The triangular system has not been changed.

## 1.12 Triangulation, step 12

**Choosing variable:** Trying the variable with index 8.

**Variable $x_8$ selected:** The number of polynomials with this variable, with indexes from 1 to 8, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_7$. No reduction needed.

The triangular system has not been changed.

## 1.13 Triangulation, step 13

**Choosing variable:** Trying the variable with index 7.

**Variable $x_7$ selected:** The number of polynomials with this variable, with indexes from 1 to 7, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_6$. No reduction needed.

The triangular system has not been changed.

### 1.14 Triangulation, step 14

**Choosing variable:** Trying the variable with index 6.

**Variable $x_6$ selected:** The number of polynomials with this variable, with indexes from 1 to 6, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_5$. No reduction needed.

The triangular system has not been changed.

### 1.15 Triangulation, step 15

**Choosing variable:** Trying the variable with index 5.

**Variable $x_5$ selected:** The number of polynomials with this variable, with indexes from 1 to 5, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_4$. No reduction needed.

The triangular system has not been changed.

### 1.16 Triangulation, step 16

**Choosing variable:** Trying the variable with index 4.

**Variable $x_4$ selected:** The number of polynomials with this variable, with indexes from 1 to 4, is 1.

**Single polynomial with chosen variable:** Chosen polynomial is $p_3$. No reduction needed.

The triangular system has not been changed.

### 1.17 Triangulation, step 17

**Choosing variable:** Trying the variable with index 3.

**Error:** Variable with index 3 not found in polynomial system.

## 2 Prover results

**Status:** Proving failed - general error occurred.