OpenGeoProver Output for conjecture "geothm_zadatak"

Wu's method used

October 1, 2016

1 Invoking the theorem prover

The used proving method is Wu's method.

The input system is:

$$
\begin{aligned}
p_1 &= x_1 - \\
p_2 &= x_2 + 1 \\
p_3 &= x_3 - \\
p_4 &= x_4 \\
p_5 &= x_5 - \\
p_6 &= x_6 + x_3
\end{aligned}
$$

1.1 Triangulation, step 1

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_6. No reduction needed.

The triangular system has not been changed.

1.2 Triangulation, step 2

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_5. No reduction needed.

The triangular system has not been changed.

1.3 Triangulation, step 3

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_4. No reduction needed.

The triangular system has not been changed.

1.4 Triangulation, step 4

Choosing variable: Trying the variable with index 3.

Variable x_3 selected: The number of polynomials with this variable, with indexes from 1 to 3, is 1.

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

The triangular system has not been changed.

1.5 Triangulation, step 5

Choosing variable: Trying the variable with index 2.

Variable x_2 selected: The number of polynomials with this variable, with indexes from 1 to 2, is 1.

Single polynomial with chosen variable: Chosen polynomial is p_2. No reduction needed.

The triangular system has not been changed.

1.6 Triangulation, step 6

Choosing variable: Trying the variable with index 1.

Variable x_1 selected: The number of polynomials with this variable, with indexes from 1 to 1, is 1.

Single polynomial with chosen variable: Chosen polynomial is p_1. No reduction needed.

The triangular system has not been changed.

The triangular system is:

$$
\begin{aligned}
p_1 &= x_1 - \\
p_2 &= x_2 + 1 \\
p_3 &= x_3 - \\
p_4 &= x_4 \\
p_5 &= x_5 - \\
p_6 &= x_6 + x_3
\end{aligned}
$$

2 Final Remainder

2.1 Final remainder for conjecture geothm_zadatak

Calculating final remainder of the conclusion:

$$
g = x_5 x_2 + x_3 x_1
$$

with respect to the triangular system.

1. Pseudo remainder with p_6 over variable x_6:

$$
g = x_5 x_2 + x_3 x_1
$$

2. Pseudo remainder with p_5 over variable x_5:

$$
g = x_3 x_1 + x_2
$$

3. Pseudo remainder with p_4 over variable x_4:

$$
g = x_3 x_1 + x_2
$$

4. Pseudo remainder with p_3 over variable x_3:

$$
g = x_2 + x_1
$$

5. Pseudo remainder with p_2 over variable x_2:

$$
g = x_1 -
$$

6. Pseudo remainder with p_1 over variable x_1:

$$
g = 0
$$

3 Prover results

Status: Theorem has been proved.

Space Complexity: The biggest polynomial obtained during prover execution contains 2 terms.

Time Complexity: Time spent by the prover is 0.031 seconds.

4 NDG Conditions

NDG Conditions in readable form

- There are no NDG conditions for this theorem