

<http://www.youtube.com/watch?v=qcD8TPUFDgw>

1. Find the solutions of the following system of algebraic equations by Groebner basis.

$$112x^2 - 13888x - 3y^2 - 610y + 9653 = 0, -44x^2 + (-3y + 251)x + 11y - 151 = 0$$

$$[112*x^2 - 13888*x - 3*y^2 - 610*y + 9653, -44*x^2 + (-3*y + 251)*x + 11*y - 151]$$

2. Find the solutions of the following system of algebraic equations by Groebner basis.

$$(7541y + 15870409047)x^2 + (-583577y - 181228051403)x + 13559008y + 541121729128 = 0,$$

$$7541x^3 + 198986x^2 + (-4y - 3312981)x + 207y + 11195727 = 0,$$

$$-104738380933960x^2 + (3459964786y + 1071443431062646)x + 7541y^2 - 99640222580y - 2980162123336081 = 0$$

$$[(7541*y + 15870409047)*x^2 + (-583577*y - 181228051403)*x + 13559008*y + 541121729128, 7541*x^3 + 198986*x^2 + (-4*y - 3312981)*x + 207*y + 11195727, -104738380933960*x^2 + (3459964786*y + 1071443431062646)*x + 7541*y^2 - 99640222580*y - 2980162123336081]$$