1. The matrix which defines a set of linear equations (coefficients are Reals) is in koeficientyReal.xls. Find the solution.

2. The matrix defining a set of linear equations (coefficients are complex numbers ) is in koeficientyKomplex.xls. Find the solution.

3. Solve

a) assuming

b) assuming

4 Evaluate

5. Find extremes of assuming the constraint

6. File teploty.xls contains mean daily temperatures . Use power – temperature dependence according to table below. Find the total energy (unit kWh).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Temperature (°C) |  |  |  |  |  |  |  |
| Power  (kW) | 20 | 15 | 12 | 9 | 5 | 3 | 0 |

7. File DataStatistika.xls contains equi-distantly sampled values of electric current. Evaluate standard deviation, mean value and variance of the data. assuming

9. Find exponential form of .

10. Find exponential and Cartesian form of for a .

11. Evaluate

12. Find the root of equation .

13. Coordinates of in classical ortho-normal basis are Find the coordinates with respect of the basis of vectors

.

14. Evaluate

15. Let *f* is a function, . Plot the graph of for

16. Assume a differential equation . For which *c* values is ?

17. Be , points in 2D Cartesian space. Find the 3rd order fit of the point and evaluate its value for the first coordinate equal 2.