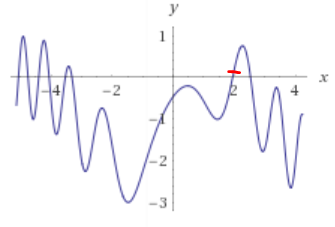
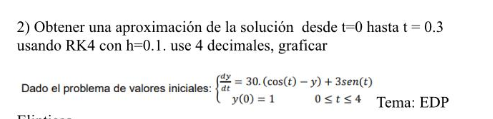
1. Newton Raphson

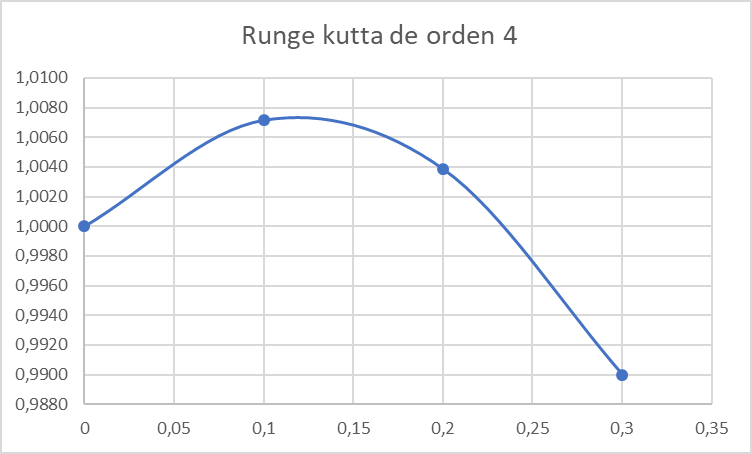
Elegimos un

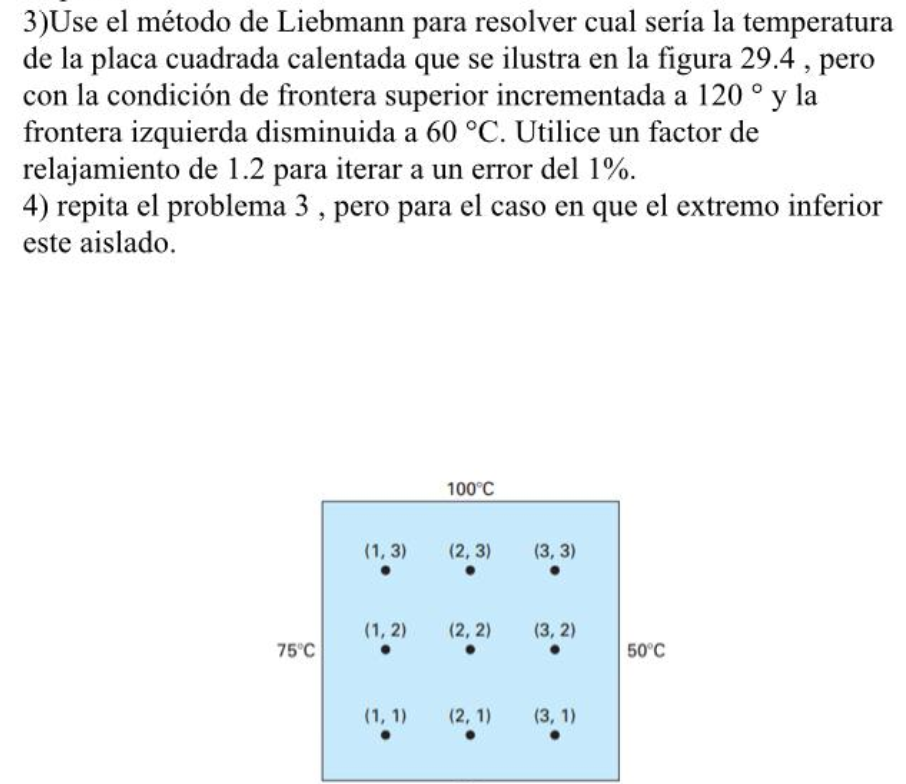
En 7 iteraciones la raíz es 2.5322

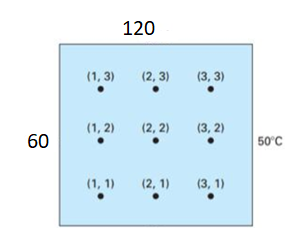


1. Runge kutta orden 4









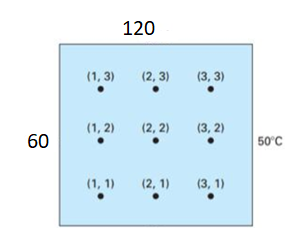
Para

71.2044 79.9776 75.3913

41.1300 38.4768 51.2220

23.0400 13.4100 22.4724

b. Aislado



La matriz de coeficientes P es

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | -1 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| -1 | 4 | -1 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | -1 | 4 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| -1 | 0 | 0 | 4 | -1 | 0 | -1 | 0 | 0 | 0 | 0 | 0 |
| 0 | -1 | 0 | -1 | 4 | -1 | 0 | -1 | 0 | 0 | 0 | 0 |
| 0 | 0 | -1 | 0 | -1 | 4 | 0 | 0 | -1 | 0 | 0 | 0 |
| 0 | 0 | 0 | -1 | 0 | 0 | 4 | -1 | 0 | -1 | 0 | 0 |
| 0 | 0 | 0 | 0 | -1 | 0 | -1 | 4 | -1 | 0 | -1 | 0 |
| 0 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 4 | 0 | 0 | -1 |
| 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | 0 | 4 | -1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 4 | -1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 0 | -1 | 4 |

El vector

T=

|  |
| --- |
| 60 |
| 0 |
| 50 |
| 60 |
| 0 |
| 50 |
| 60 |
| 0 |
| 50 |
| 180 |
| 120 |
| 170 |

Resolviendo el sistema

*T*10 = 63.059 *T*20 = 62.825 *T*30 = 58.110

*T*11 = 64.705 *T*21 = 65.066 *T*31 = 59.808

*T*12 = 70.694 *T*22 = 72.926 *T*32 = 66.055

*T*13 = 85.146 *T*23 = 89.890 *T*33 = 81.486