| Dimension | Initial Center1 | Initial Center2 | Error | Iteration |
| --- | --- | --- | --- | --- |
| **1000** | 0 | 2.0 | 0.449463993596 | 10 |
| **1000** | 0 | 2.1 | 0.447738746377 | 5 |
| **1000** | 0 | 2.2 | 0.444720846451 | 5 |
| **1000** | 0 | 2.3 | 0.441284411307 | 4 |
| **1000** | 0 | 2.4 | 0.437488079409 | 3 |
| **1000** | 0 | 2.5 | 0.436782495687 | 2 |
| **1000** | 0 | 2.6 | 0.447268519365 | 2 |
| **1000** | 0 | 2.7 | 0.444328038087 | 1 |
| **1000** | 0 | 2.8 | 0.429096094879 | 2 |
| **1000** | 0 | 2.9 | 0.441365374302 | 1 |
| **1000** | 0 | 3.0 | 0.434848574707 | 1 |
| **1000** | 0 | 3.1 | 0.433296705287 | 1 |
| **1000** | 0 | 3.2 | 0.441818993646 | 1 |
| **1000** | 0 | 3.3 | 0.433693527225 | 1 |
| **1000** | 0 | 3.4 | 0.418265415165 | 1 |
| **1000** | 0 | 3.5 | 0.42501144366 | 1 |
| **1000** | 0 | 3.6 | 0.427932733423 | 1 |
| **1000** | 0 | 3.7 | 0.437837503462 | 1 |
| **1000** | 0 | 3.8 | 0.437696617282 | 1 |
| **1000** | 0 | 3.9 | 0.414303112835 | 1 |
| **1000** | 0 | 8 | 0.42393069503 | 1 |
| **1000** | 0 | 16 | 0.425515295305 | 1 |
| **1000** | 0 | 32 | 0.439376412892 | 1 |
|  |  |  |  |  |
|  |  |  |  |  |

| dim | Initial Center1 | Initial Center2 | err | iteration |
| --- | --- | --- | --- | --- |
| **900** | 0 | 2.0 | 0.443094925224 | 7 |
| **900** | 0 | 2.1 | 0.444808535173 | 4 |
| **900** | 0 | 2.2 | 0.441537359778 | 4 |
| **900** | 0 | 2.3 | 0.420573454322 | 3 |
| **900** | 0 | 2.4 | 0.436811916049 | 2 |
| **900** | 0 | 2.5 | 0.428353373132 | 2 |
| **900** | 0 | 2.6 | 0.425827022803 | 2 |
| **900** | 0 | 2.7 | 0.418767576645 | 1 |
| **900** | 0 | 2.8 | 0.435424341237 | 1 |
| **900** | 0 | 2.9 | 0.425157757959 | 1 |
| **900** | 0 | 3.0 | 0.425251302299 | 1 |
| **900** | 0 | 3.1 | 0.397944081968 | 1 |
| **900** | 0 | 3.2 | 0.413995636333 | 1 |
| **900** | 0 | 3.3 | 0.416233335052 | 1 |
| **900** | 0 | 3.4 | 0.405627560981 | 1 |
| **900** | 0 | 3.5 | 0.403390235169 | 1 |
| **900** | 0 | 3.6 | 0.410063436451 | 1 |
| **900** | 0 | 3.7 | 0.413638013862 | 1 |
| **900** | 0 | 3.8 | 0.403170682428 | 1 |
| **900** | 0 | 3.9 | 0.411987640926 | 1 |
| **900** | 0 | 8 | 0.4062171065 | 1 |
| **900** | 0 | 16 | 0.40633169659 | 1 |
| **900** | 0 | 32 | 0.407141460024 | 1 |
|  |  |  |  |  |
|  |  |  |  |  |

| dim | Initial Center1 | Initial Center2 | err | iteration |
| --- | --- | --- | --- | --- |
| **800** | 0 | 2.0 | 0.447596937056 | 5 |
| **800** | 0 | 2.1 | 0.429234520923 | 4 |
| **800** | 0 | 2.2 | 0.419510875482 | 3 |
| **800** | 0 | 2.3 | 0.423031252488 | 2 |
| **800** | 0 | 2.4 | 0.422445053879 | 2 |
| **800** | 0 | 2.5 | 0.397043127411 | 2 |
| **800** | 0 | 2.6 | 0.404308080566 | 2 |
| **800** | 0 | 2.7 | 0.396150752163 | 1 |
| **800** | 0 | 2.8 | 0.406794949758 | 1 |
| **800** | 0 | 2.9 | 0.38104212049 | 1 |
| **800** | 0 | 3.0 | 0.392841359657 | 1 |
| **800** | 0 | 3.1 | 0.393860161427 | 1 |
| **800** | 0 | 3.2 | 0.379727540211 | 1 |
| **800** | 0 | 3.3 | 0.39456340836 | 1 |
| **800** | 0 | 3.4 | 0.383858881603 | 1 |
| **800** | 0 | 3.5 | 0.403990502323 | 1 |
| **800** | 0 | 3.6 | 0.386438869527 | 1 |
| **800** | 0 | 3.7 | 0.385602671084 | 1 |
| **800** | 0 | 3.8 | 0.388594387076 | 1 |
| **800** | 0 | 3.9 | 0.399836028474 | 1 |
| **800** | 0 | 8 | 0.368890907614 | 1 |
| **800** | 0 | 16 | 0.39097749719 | 1 |
| **800** | 0 | 32 | 0.391518818029 | 1 |
|  |  |  |  |  |
|  |  |  |  |  |