

| iteration | gap | feasibility | local kappa | lower bound of the handicap | mu | alpha_x | alpha_s |
|-----------|----------|-------------|-------------|--------------------------------|-------------|-------------|-------------|
| 1 | 0.974015 | 3.10175e-16 | 1.88905e+34 | 1.88905e+34 | 0.001 | 7.49944e-18 | 7.49944e-18 |
| 2 | 0.962297 | 1.41063e-16 | 3.54204e+33 | 1.88905e+34 | 0.000983755 | 1.47808e-17 | 1.47808e-17 |
| 3 | 0.938349 | 1.45247e-16 | 7.16966e+32 | 1.88905e+34 | 0.00097192 | 4.69606e-17 | 4.69606e-17 |
| 4 | 0.912246 | 1.46839e-16 | 8.09959e+31 | 1.88905e+34 | 0.000947732 | 1.45838e-16 | 1.45838e-16 |
| 5 | 0.885462 | 2.48725e-16 | 8.52291e+30 | 1.88905e+34 | 0.000921369 | 4.55307e-16 | 4.55307e-16 |
| 6 | 0.858121 | 1.6938e-16 | 8.77445e+29 | 1.88905e+34 | 0.000894317 | 1.43339e-15 | 1.43339e-15 |
| 7 | 0.831369 | 4.0287e-16 | 8.85048e+28 | 1.88905e+34 | 0.000866702 | 4.46322e-15 | 4.46322e-15 |
| 8 | 0.804805 | 4.64085e-16 | 9.13036e+27 | 1.88905e+34 | 0.000839683 | 1.38437e-14 | 1.38437e-14 |
| 9 | 0.778142 | 2.52461e-16 | 9.50523e+26 | 1.88905e+34 | 0.000812853 | 4.2975e-14 | 4.2975e-14 |
| 10 | 0.751177 | 2.1053e-16 | 9.87529e+25 | 1.88905e+34 | 0.000785923 | 1.34047e-13 | 1.34047e-13 |
| 11 | 0.723765 | 2.97371e-16 | 1.01493e+25 | 1.88905e+34 | 0.000758689 | 4.21483e-13 | 4.21483e-13 |
| 12 | 0.696833 | 2.89314e-16 | 1.02482e+24 | 1.88905e+34 | 0.000731003 | 1.31439e-12 | 1.31439e-12 |
| 13 | 0.670192 | 8.40995e-17 | 1.05284e+23 | 1.88905e+34 | 0.000703801 | 4.0775e-12 | 4.0775e-12 |
| 14 | 0.643498 | 3.96433e-16 | 1.09482e+22 | 1.88905e+34 | 0.000676893 | 1.26535e-11 | 1.26535e-11 |
| 15 | 0.616536 | 1.25556e-16 | 1.13779e+21 | 1.88905e+34 | 0.000649933 | 3.94373e-11 | 3.94373e-11 |
| 16 | 0.589148 | 1.31601e-16 | 1.17101e+20 | 1.88905e+34 | 0.000622702 | 1.23863e-10 | 1.23863e-10 |
| 17 | 0.5621 | 9.26799e-17 | 1.185e+19 | 1.88905e+34 | 0.000595039 | 3.86828e-10 | 3.86828e-10 |
| 18 | 0.535422 | 1.36316e-16 | 1.21337e+18 | 1.88905e+34 | 0.000567721 | 1.20025e-09 | 1.20025e-09 |
| 19 | 0.508725 | 1.78967e-16 | 1.26077e+17 | 1.88905e+34 | 0.000540776 | 3.72364e-09 | 3.72364e-09 |
| 20 | 0.481785 | 2.71435e-16 | 1.31084e+16 | 1.88905e+34 | 0.000513812 | 1.15972e-08 | 1.15972e-08 |
| 21 | 0.454435 | 1.26176e-16 | 1.35105e+15 | 1.88905e+34 | 0.000486603 | 3.63857e-08 | 3.63857e-08 |
| 22 | 0.427288 | 2.42834e-16 | 1.37013e+14 | 1.88905e+34 | 0.000458979 | 1.13796e-07 | 1.13796e-07 |
| 23 | 0.400581 | 1.22591e-16 | 1.3985e+13 | 1.88905e+34 | 0.000431561 | 3.53164e-07 | 3.53164e-07 |
| 24 | 0.373887 | 1.19066e-16 | 1.45201e+12 | 1.88905e+34 | 0.000404587 | 1.09539e-06 | 1.09539e-06 |
| 25 | 0.346973 | 1.12691e-16 | 1.51028e+11 | 1.88905e+34 | 0.000377626 | 3.40924e-06 | 3.40924e-06 |
| 26 | 0.319663 | 1.18653e-16 | 1.55882e+10 | 1.88905e+34 | 0.000350442 | 1.06851e-05 | 1.06851e-05 |
| 27 | 0.292413 | 1.4727e-16 | 1.58441e+09 | 1.88905e+34 | 0.000322859 | 3.34612e-05 | 3.34612e-05 |
| 28 | 0.26566 | 1.76362e-16 | 1.61293e+08 | 1.88905e+34 | 0.000295337 | 0.000103839 | 0.000103839 |
| 29 | 0.238911 | 1.18697e-16 | 1.67555e+07 | 1.88905e+34 | 0.000268316 | 0.00032172 | 0.00032172 |
| 30 | 0.211859 | 1.85403e-16 | 1.74984e+06 | 1.88905e+34 | 0.0002413 | 0.000998237 | 0.000998237 |
| 31 | 0.184153 | 1.50843e-16 | 182606 | 1.88905e+34 | 0.000213978 | 0.00310539 | 0.00310539 |
| 32 | 0.15582 | 2.30508e-16 | 19057.9 | 1.88905e+34 | 0.000185994 | 0.00955116 | 0.00955116 |
| 33 | 0.126714 | 2.17991e-16 | 2060.23 | 1.88905e+34 | 0.000157378 | 0.0282355 | 0.0282355 |

| | | | | | | | |
|----|-------------|-------------|----------|-------------|-------------|-----------|-----------|
| 34 | 0.0952807 | 1.71961e-16 | 245.429 | 1.88905e+34 | 0.000127981 | 0.0781667 | 0.0781667 |
| 35 | 0.0617629 | 1.38702e-16 | 33.1774 | 1.88905e+34 | 9.62335e-05 | 0.191158 | 0.191158 |
| 36 | 0.0317027 | 1.16485e-16 | 5.16354 | 1.88905e+34 | 6.23806e-05 | 0.379583 | 0.379583 |
| 37 | 0.0122436 | 1.64968e-16 | 0.868459 | 1.88905e+34 | 3.20197e-05 | 0.587829 | 0.587829 |
| 38 | 0.00335418 | 2.40445e-16 | 0.055048 | 1.88905e+34 | 1.23661e-05 | 0.766807 | 0.766807 |
| 39 | 0.00072735 | 3.02363e-16 | 0 | 1.88905e+34 | 3.38772e-06 | 0.870335 | 0.870335 |
| 40 | 0.00016471 | 2.13151e-16 | 0 | 1.88905e+34 | 7.34624e-07 | 0.910614 | 0.910614 |
| 41 | 4.05283e-05 | 3.33243e-16 | 0 | 1.88905e+34 | 1.66357e-07 | 0.952317 | 0.952317 |
| 42 | 1.03736e-05 | 1.98527e-16 | 0 | 1.88905e+34 | 4.09336e-08 | 0.990275 | 0.990275 |
| 43 | 2.78039e-06 | 1.93821e-16 | 0 | 1.88905e+34 | 1.04773e-08 | 1 | 1 |

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Settings:

Matrix implementation:NATIVE

Matrix factorization:LU

Interior point method:CLASSIC PRIMAL DUAL

Search direction:IDENTITY MINUS SQUARE ROOT

Initializer:ALLONEINIT

theta = 0.999 rho = 0.95 eps = 1e-05

Task characteristics:

Name:Cszimadia Zsolt's matrix

Size:100

Number of iterations: 43

CPU time: 3.98 seconds

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| iteration | gap | feasibility | local kappa | lower bound of the handicap | mu | alpha_x | alpha_s |
|-----------|----------|-------------|-------------|--------------------------------|-------|-------------|-------------|
| 1 | 0.974015 | 3.10103e-16 | 1.88905e+34 | 1.88905e+34 | 0.001 | 7.38635e-18 | 7.38635e-18 |

| | | | | | | | |
|----|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
| 2 | 0.962297 | 1.41178e-16 | 3.54204e+33 | 1.88905e+34 | 0.000983755 | 1.45596e-17 | 1.45596e-17 |
| 3 | 0.938349 | 1.4483e-16 | 7.16966e+32 | 1.88905e+34 | 0.00097192 | 4.6262e-17 | 4.6262e-17 |
| 4 | 0.912246 | 1.46824e-16 | 8.09959e+31 | 1.88905e+34 | 0.000947732 | 1.43694e-16 | 1.43694e-16 |
| 5 | 0.885462 | 2.44066e-16 | 8.52291e+30 | 1.88905e+34 | 0.000921369 | 4.48704e-16 | 4.48704e-16 |
| 6 | 0.858121 | 1.72842e-16 | 8.77445e+29 | 1.88905e+34 | 0.000894317 | 1.41289e-15 | 1.41289e-15 |
| 7 | 0.831369 | 4.01921e-16 | 8.85048e+28 | 1.88905e+34 | 0.000866702 | 4.40035e-15 | 4.40035e-15 |
| 8 | 0.804805 | 4.68394e-16 | 9.13036e+27 | 1.88905e+34 | 0.000839683 | 1.36517e-14 | 1.36517e-14 |
| 9 | 0.778142 | 2.49283e-16 | 9.50523e+26 | 1.88905e+34 | 0.000812853 | 4.2388e-14 | 4.2388e-14 |
| 10 | 0.751177 | 2.12251e-16 | 9.87529e+25 | 1.88905e+34 | 0.000785923 | 1.32246e-13 | 1.32246e-13 |
| 11 | 0.723765 | 2.80235e-16 | 1.01493e+25 | 1.88905e+34 | 0.000758689 | 4.15912e-13 | 4.15912e-13 |
| 12 | 0.696833 | 4.3176e-16 | 1.02482e+24 | 1.88905e+34 | 0.000731003 | 1.29732e-12 | 1.29732e-12 |
| 13 | 0.670192 | 2.34788e-16 | 1.05284e+23 | 1.88905e+34 | 0.000703801 | 4.02552e-12 | 4.02552e-12 |
| 14 | 0.643498 | 2.12424e-16 | 1.09482e+22 | 1.88905e+34 | 0.000676893 | 1.24952e-11 | 1.24952e-11 |
| 15 | 0.616536 | 8.8435e-17 | 1.13779e+21 | 1.88905e+34 | 0.000649933 | 3.89535e-11 | 3.89535e-11 |
| 16 | 0.589148 | 1.71837e-16 | 1.17101e+20 | 1.88905e+34 | 0.000622702 | 1.22374e-10 | 1.22374e-10 |
| 17 | 0.5621 | 1.25977e-16 | 1.185e+19 | 1.88905e+34 | 0.000595039 | 3.82279e-10 | 3.82279e-10 |
| 18 | 0.535422 | 2.49204e-16 | 1.21337e+18 | 1.88905e+34 | 0.000567721 | 1.18645e-09 | 1.18645e-09 |
| 19 | 0.508725 | 1.40792e-16 | 1.26077e+17 | 1.88905e+34 | 0.000540776 | 3.68182e-09 | 3.68182e-09 |
| 20 | 0.481785 | 1.98976e-16 | 1.31084e+16 | 1.88905e+34 | 0.000513812 | 1.14702e-08 | 1.14702e-08 |
| 21 | 0.454435 | 1.25125e-16 | 1.35105e+15 | 1.88905e+34 | 0.000486603 | 3.59975e-08 | 3.59975e-08 |
| 22 | 0.427288 | 1.26058e-16 | 1.37013e+14 | 1.88905e+34 | 0.000458979 | 1.12615e-07 | 1.12615e-07 |
| 23 | 0.400581 | 3.74797e-16 | 1.3985e+13 | 1.88905e+34 | 0.000431561 | 3.49608e-07 | 3.49608e-07 |
| 24 | 0.373887 | 1.61116e-16 | 1.45201e+12 | 1.88905e+34 | 0.000404587 | 1.0847e-06 | 1.0847e-06 |
| 25 | 0.346973 | 9.76174e-17 | 1.51028e+11 | 1.88905e+34 | 0.000377626 | 3.37706e-06 | 3.37706e-06 |
| 26 | 0.319663 | 1.50406e-16 | 1.55882e+10 | 1.88905e+34 | 0.000350442 | 1.05878e-05 | 1.05878e-05 |
| 27 | 0.292413 | 1.16833e-16 | 1.58441e+09 | 1.88905e+34 | 0.000322859 | 3.31685e-05 | 3.31685e-05 |
| 28 | 0.26566 | 1.81946e-16 | 1.61293e+08 | 1.88905e+34 | 0.000295337 | 0.000102969 | 0.000102969 |
| 29 | 0.23891 | 1.76354e-16 | 1.67555e+07 | 1.88905e+34 | 0.000268316 | 0.000319149 | 0.000319149 |
| 30 | 0.211858 | 1.71512e-16 | 1.74985e+06 | 1.88905e+34 | 0.0002413 | 0.000990658 | 0.000990658 |
| 31 | 0.184149 | 1.8655e-16 | 182609 | 1.88905e+34 | 0.000213977 | 0.00308313 | 0.00308313 |
| 32 | 0.15581 | 2.07017e-16 | 19058.9 | 1.88905e+34 | 0.000185991 | 0.00948688 | 0.00948688 |
| 33 | 0.126687 | 1.6192e-16 | 2060.59 | 1.88905e+34 | 0.000157368 | 0.028058 | 0.028058 |
| 34 | 0.095208 | 1.53714e-16 | 245.54 | 1.88905e+34 | 0.000127954 | 0.0777083 | 0.0777083 |
| 35 | 0.0616179 | 1.4216e-16 | 33.2091 | 1.88905e+34 | 9.61601e-05 | 0.190059 | 0.190059 |
| 36 | 0.0314654 | 2.39604e-16 | 5.17535 | 1.88905e+34 | 6.22341e-05 | 0.377607 | 0.377607 |

| | | | | | | | |
|----|-------------|-------------|-----------|-------------|-------------|----------|----------|
| 37 | 0.0120434 | 4.44192e-16 | 0.869991 | 1.88905e+34 | 3.178e-05 | 0.584248 | 0.584248 |
| 38 | 0.00326495 | 4.08063e-16 | 0.0556476 | 1.88905e+34 | 1.21638e-05 | 0.760585 | 0.760585 |
| 39 | 0.000703843 | 2.62125e-16 | 0 | 1.88905e+34 | 3.2976e-06 | 0.862304 | 0.862304 |
| 40 | 0.000157997 | 2.96789e-16 | 0 | 1.88905e+34 | 7.10881e-07 | 0.9064 | 0.9064 |
| 41 | 4.00443e-05 | 1.84559e-16 | 0 | 1.88905e+34 | 1.59577e-07 | 0.943052 | 0.943052 |
| 42 | 1.08188e-05 | 1.36849e-16 | 0 | 1.88905e+34 | 4.04447e-08 | 0.970468 | 0.970468 |
| 43 | 2.96067e-06 | 4.94384e-16 | 0 | 1.88905e+34 | 1.0927e-08 | 0.991971 | 0.991971 |

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Settings:

Matrix implementation:NATIVE

Matrix factorization:LU

Interior point method:CLASSIC PRIMAL DUAL

Search direction:CLASSIC

Initializer:ALLONEINIT

theta = 0.999 rho = 0.95 eps = 1e-05

Task characteristics:

Name:Csizmadia Zsolt's matrix

Size:100

Number of iterations: 43

CPU time: 3.752 seconds

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| iteration | gap | feasibility | local kappa | lower bound of the handicap | mu | alpha_x | alpha_s |
|-----------|----------|-------------|-------------|-----------------------------|-------------|-------------|-------------|
| 1 | 0.974015 | 3.10175e-16 | 1.88905e+34 | 1.88905e+34 | 0.001 | 3.80996e-18 | 3.80996e-18 |
| 2 | 0.962297 | 1.41343e-16 | 3.54204e+33 | 1.88905e+34 | 0.000983755 | 7.50815e-18 | 7.50815e-18 |
| 3 | 0.938349 | 1.44524e-16 | 7.16966e+32 | 1.88905e+34 | 0.00097192 | 2.38521e-17 | 2.38521e-17 |
| 4 | 0.912246 | 1.46503e-16 | 8.09959e+31 | 1.88905e+34 | 0.000947732 | 7.4059e-17 | 7.4059e-17 |

| | | | | | | | |
|----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 5 | 0.885462 | 2.45582e-16 | 8.52291e+30 | 1.88905e+34 | 0.000921369 | 2.31162e-16 | 2.31162e-16 |
| 6 | 0.858121 | 1.72907e-16 | 8.77445e+29 | 1.88905e+34 | 0.000894317 | 7.27574e-16 | 7.27574e-16 |
| 7 | 0.831369 | 4.01743e-16 | 8.85048e+28 | 1.88905e+34 | 0.000866702 | 2.26495e-15 | 2.26495e-15 |
| 8 | 0.804805 | 4.66866e-16 | 9.13036e+27 | 1.88905e+34 | 0.000839683 | 7.02364e-15 | 7.02364e-15 |
| 9 | 0.778142 | 2.55263e-16 | 9.50523e+26 | 1.88905e+34 | 0.000812853 | 2.17983e-14 | 2.17983e-14 |
| 10 | 0.751177 | 2.04089e-16 | 9.87529e+25 | 1.88905e+34 | 0.000785923 | 6.79765e-14 | 6.79765e-14 |
| 11 | 0.723765 | 2.84587e-16 | 1.01493e+25 | 1.88905e+34 | 0.000758689 | 2.13684e-13 | 2.13684e-13 |
| 12 | 0.696833 | 1.48092e-16 | 1.02482e+24 | 1.88905e+34 | 0.000731003 | 6.66199e-13 | 6.66199e-13 |
| 13 | 0.670192 | 8.90252e-17 | 1.05284e+23 | 1.88905e+34 | 0.000703801 | 2.06616e-12 | 2.06616e-12 |
| 14 | 0.643498 | 1.87306e-16 | 1.09482e+22 | 1.88905e+34 | 0.000676893 | 6.41012e-12 | 6.41012e-12 |
| 15 | 0.616536 | 1.99765e-16 | 1.13779e+21 | 1.88905e+34 | 0.000649933 | 1.99733e-11 | 1.99733e-11 |
| 16 | 0.589148 | 2.3895e-16 | 1.17101e+20 | 1.88905e+34 | 0.000622702 | 6.2714e-11 | 6.2714e-11 |
| 17 | 0.5621 | 2.72074e-16 | 1.185e+19 | 1.88905e+34 | 0.000595039 | 1.95802e-10 | 1.95802e-10 |
| 18 | 0.535422 | 8.01941e-17 | 1.21337e+18 | 1.88905e+34 | 0.000567721 | 6.07361e-10 | 6.07361e-10 |
| 19 | 0.508725 | 2.21081e-16 | 1.26077e+17 | 1.88905e+34 | 0.000540776 | 1.88372e-09 | 1.88372e-09 |
| 20 | 0.481785 | 1.28463e-16 | 1.31084e+16 | 1.88905e+34 | 0.000513812 | 5.86507e-09 | 5.86507e-09 |
| 21 | 0.454435 | 1.12567e-16 | 1.35105e+15 | 1.88905e+34 | 0.000486603 | 1.83958e-08 | 1.83958e-08 |
| 22 | 0.427288 | 3.71163e-16 | 1.37013e+14 | 1.88905e+34 | 0.000458979 | 5.75139e-08 | 5.75139e-08 |
| 23 | 0.400581 | 3.08657e-16 | 1.3985e+13 | 1.88905e+34 | 0.000431561 | 1.78436e-07 | 1.78436e-07 |
| 24 | 0.373887 | 2.88475e-16 | 1.45201e+12 | 1.88905e+34 | 0.000404587 | 5.5326e-07 | 5.5326e-07 |
| 25 | 0.346973 | 1.10449e-16 | 1.51028e+11 | 1.88905e+34 | 0.000377626 | 1.72134e-06 | 1.72134e-06 |
| 26 | 0.319663 | 1.2144e-16 | 1.55882e+10 | 1.88905e+34 | 0.000350442 | 5.39302e-06 | 5.39302e-06 |
| 27 | 0.292413 | 2.15771e-16 | 1.58441e+09 | 1.88905e+34 | 0.000322859 | 1.68823e-05 | 1.68823e-05 |
| 28 | 0.26566 | 1.38304e-16 | 1.61292e+08 | 1.88905e+34 | 0.000295337 | 5.23696e-05 | 5.23696e-05 |
| 29 | 0.238911 | 1.14354e-16 | 1.67554e+07 | 1.88905e+34 | 0.000268317 | 0.000162189 | 0.000162189 |
| 30 | 0.211861 | 1.42184e-16 | 1.74982e+06 | 1.88905e+34 | 0.0002413 | 0.000503028 | 0.000503028 |
| 31 | 0.184157 | 1.2917e-16 | 182602 | 1.88905e+34 | 0.000213979 | 0.00156415 | 0.00156415 |
| 32 | 0.15583 | 1.23046e-16 | 19056.9 | 1.88905e+34 | 0.000185998 | 0.00480862 | 0.00480862 |
| 33 | 0.126745 | 1.42998e-16 | 2059.84 | 1.88905e+34 | 0.000157389 | 0.0142089 | 0.0142089 |
| 34 | 0.0953611 | 1.28592e-16 | 245.312 | 1.88905e+34 | 0.000128012 | 0.0393182 | 0.0393182 |
| 35 | 0.061923 | 1.37499e-16 | 33.1439 | 1.88905e+34 | 9.63147e-05 | 0.0961418 | 0.0961418 |
| 36 | 0.0319628 | 2.15713e-16 | 5.15115 | 1.88905e+34 | 6.25423e-05 | 0.190804 | 0.190804 |
| 37 | 0.0124649 | 2.57927e-16 | 0.866856 | 1.88905e+34 | 3.22824e-05 | 0.295769 | 0.295769 |
| 38 | 0.00345391 | 2.30124e-16 | 0.0544409 | 1.88905e+34 | 1.25895e-05 | 0.386723 | 0.386723 |
| 39 | 0.000753011 | 3.16645e-16 | 0 | 1.88905e+34 | 3.48845e-06 | 0.439755 | 0.439755 |

| | | | | | | | |
|----|-------------|-------------|---|-------------|-------------|----------|----------|
| 40 | 0.000172492 | 9.62904e-16 | 0 | 1.88905e+34 | 7.60541e-07 | 0.457702 | 0.457702 |
| 41 | 4.11705e-05 | 3.25839e-16 | 0 | 1.88905e+34 | 1.74216e-07 | 0.481593 | 0.481593 |
| 42 | 9.88346e-06 | 3.61272e-16 | 0 | 1.88905e+34 | 4.15823e-08 | 0.506957 | 0.506957 |

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Settings:

Matrix implementation:NATIVE

Matrix factorization:LU

Interior point method:CLASSIC PRIMAL DUAL

Search direction:SQUARE ROOT

Initializer:ALLONEINIT

theta = 0.999 rho = 0.95 eps = 1e-05

Task characteristics:

Name:Csizmadia Zsolt's matrix

Size:100

Number of iterations: 42

CPU time: 3.747 seconds

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| iteration | gap | feasibility | local kappa | lower bound of the handicap | mu | alpha_x | alpha_s |
|-----------|----------|-------------|-------------|--------------------------------|----------|-------------|-------------|
| 1 | 0.974015 | 3.09959e-16 | 1.88905e+34 | 1.88905e+34 | 0.9 | 7.55858e-17 | 7.55858e-17 |
| 2 | 0.962297 | 1.40751e-16 | 3.54204e+33 | 1.88905e+34 | 0.88538 | 1.30426e-16 | 1.30426e-16 |
| 3 | 0.938349 | 1.46578e-16 | 7.16966e+32 | 1.88905e+34 | 0.874728 | 3.801e-16 | 3.801e-16 |
| 4 | 0.912246 | 1.4604e-16 | 8.09959e+31 | 1.88905e+34 | 0.852959 | 1.01078e-15 | 1.01078e-15 |
| 5 | 0.885462 | 2.60392e-16 | 8.52291e+30 | 1.88905e+34 | 0.829232 | 2.73197e-15 | 2.73197e-15 |
| 6 | 0.858121 | 1.93418e-16 | 8.77445e+29 | 1.88905e+34 | 0.804885 | 7.56865e-15 | 7.56865e-15 |
| 7 | 0.831369 | 3.23198e-16 | 8.85048e+28 | 1.88905e+34 | 0.780032 | 2.10181e-14 | 2.10181e-14 |
| 8 | 0.804805 | 6.56401e-16 | 9.13036e+27 | 1.88905e+34 | 0.755714 | 5.90088e-14 | 5.90088e-14 |

| | | | | | | | |
|----|------------|-------------|-------------|-------------|------------|-------------|-------------|
| 9 | 0.778142 | 2.16204e-16 | 9.50523e+26 | 1.88905e+34 | 0.731568 | 1.67544e-13 | 1.67544e-13 |
| 10 | 0.751177 | 3.36608e-16 | 9.87529e+25 | 1.88905e+34 | 0.707331 | 4.81688e-13 | 4.81688e-13 |
| 11 | 0.723765 | 5.00665e-16 | 1.01493e+25 | 1.88905e+34 | 0.68282 | 1.40431e-12 | 1.40431e-12 |
| 12 | 0.696833 | 1.13255e-16 | 1.02482e+24 | 1.88905e+34 | 0.657903 | 4.07978e-12 | 4.07978e-12 |
| 13 | 0.670192 | 1.61142e-16 | 1.05284e+23 | 1.88905e+34 | 0.633421 | 1.1865e-11 | 1.1865e-11 |
| 14 | 0.643498 | 1.20469e-16 | 1.09482e+22 | 1.88905e+34 | 0.609204 | 3.46888e-11 | 3.46888e-11 |
| 15 | 0.616536 | 1.24e-16 | 1.13779e+21 | 1.88905e+34 | 0.58494 | 1.02224e-10 | 1.02224e-10 |
| 16 | 0.589148 | 1.38393e-16 | 1.17101e+20 | 1.88905e+34 | 0.560431 | 3.04402e-10 | 3.04402e-10 |
| 17 | 0.5621 | 8.96717e-17 | 1.185e+19 | 1.88905e+34 | 0.535536 | 9.03284e-10 | 9.03284e-10 |
| 18 | 0.535422 | 1.60543e-16 | 1.21337e+18 | 1.88905e+34 | 0.510949 | 2.6718e-09 | 2.6718e-09 |
| 19 | 0.508725 | 3.36286e-16 | 1.26077e+17 | 1.88905e+34 | 0.486698 | 7.92505e-09 | 7.92505e-09 |
| 20 | 0.481785 | 2.01371e-16 | 1.31084e+16 | 1.88905e+34 | 0.462431 | 2.36463e-08 | 2.36463e-08 |
| 21 | 0.454435 | 1.47599e-16 | 1.35105e+15 | 1.88905e+34 | 0.437942 | 7.11789e-08 | 7.11789e-08 |
| 22 | 0.427288 | 1.36017e-16 | 1.37013e+14 | 1.88905e+34 | 0.413081 | 2.13808e-07 | 2.13808e-07 |
| 23 | 0.400581 | 2.15058e-16 | 1.3985e+13 | 1.88905e+34 | 0.388405 | 6.38472e-07 | 6.38472e-07 |
| 24 | 0.373887 | 1.22125e-16 | 1.45201e+12 | 1.88905e+34 | 0.364128 | 1.90919e-06 | 1.90919e-06 |
| 25 | 0.346972 | 1.41777e-16 | 1.51028e+11 | 1.88905e+34 | 0.339863 | 5.7354e-06 | 5.7354e-06 |
| 26 | 0.31966 | 1.24303e-16 | 1.55883e+10 | 1.88905e+34 | 0.315398 | 1.73635e-05 | 1.73635e-05 |
| 27 | 0.292404 | 1.24352e-16 | 1.58446e+09 | 1.88905e+34 | 0.290571 | 5.25467e-05 | 5.25467e-05 |
| 28 | 0.265699 | 1.45053e-16 | 1.61169e+08 | 1.88905e+34 | 0.265796 | 0.000157724 | 0.000157724 |
| 29 | 0.238886 | 1.26154e-16 | 1.67617e+07 | 1.88905e+34 | 0.241521 | 0.000473304 | 0.000473304 |
| 30 | 0.211397 | 1.58199e-16 | 1.75443e+06 | 1.88905e+34 | 0.217147 | 0.00142309 | 0.00142309 |
| 31 | 0.183187 | 1.55205e-16 | 182509 | 1.88905e+34 | 0.19216 | 0.00428931 | 0.00428931 |
| 32 | 0.15278 | 1.94871e-16 | 19087.5 | 1.88905e+34 | 0.166517 | 0.0128005 | 0.0128005 |
| 33 | 0.119467 | 1.59016e-16 | 183.409 | 1.88905e+34 | 0.138877 | 0.0367115 | 0.0367115 |
| 34 | 0.0845018 | 2.06577e-16 | 240.751 | 1.88905e+34 | 0.108596 | 0.0985584 | 0.0985584 |
| 35 | 0.051116 | 4.24299e-16 | 31.5195 | 1.88905e+34 | 0.0768122 | 0.237364 | 0.237364 |
| 36 | 0.0316658 | 5.30843e-16 | 4.53832 | 1.88905e+34 | 0.0464645 | 0.390241 | 0.390241 |
| 37 | 0.0204435 | 2.13299e-16 | 1.19251 | 1.88905e+34 | 0.0287842 | 0.458929 | 0.458929 |
| 38 | 0.0134201 | 4.23628e-16 | 0.513537 | 1.88905e+34 | 0.0185831 | 0.482083 | 0.482083 |
| 39 | 0.00888415 | 5.99709e-16 | 0.266509 | 1.88905e+34 | 0.0121988 | 0.490792 | 0.490792 |
| 40 | 0.00590944 | 2.40947e-16 | 0.113154 | 1.88905e+34 | 0.00807569 | 0.494629 | 0.494629 |
| 41 | 0.00394243 | 2.4672e-16 | 0.0199485 | 1.88905e+34 | 0.00537168 | 0.496603 | 0.496603 |
| 42 | 0.00263582 | 7.32972e-16 | 0 | 1.88905e+34 | 0.00358367 | 0.497735 | 0.497735 |
| 43 | 0.00176506 | 4.3431e-16 | 0 | 1.88905e+34 | 0.00239596 | 0.498427 | 0.498427 |

| | | | | | | | |
|----|-------------|-------------|---|-------------|-------------|----------|----------|
| 44 | 0.00118331 | 1.69099e-15 | 0 | 1.88905e+34 | 0.00160444 | 0.498873 | 0.498873 |
| 45 | 0.000793894 | 1.27627e-15 | 0 | 1.88905e+34 | 0.00107563 | 0.499172 | 0.499172 |
| 46 | 0.00053289 | 5.61962e-16 | 0 | 1.88905e+34 | 0.00072165 | 0.49938 | 0.49938 |
| 47 | 0.000357799 | 5.63544e-16 | 0 | 1.88905e+34 | 0.000484397 | 0.499529 | 0.499529 |
| 48 | 0.000240276 | 5.64731e-16 | 0 | 1.88905e+34 | 0.000325239 | 0.499638 | 0.499638 |
| 49 | 0.000161367 | 2.50716e-16 | 0 | 1.88905e+34 | 0.000218411 | 0.499719 | 0.499719 |
| 50 | 0.000108374 | 2.06727e-16 | 0 | 1.88905e+34 | 0.000146682 | 0.499781 | 0.499781 |
| 51 | 7.27827e-05 | 1.35511e-16 | 0 | 1.88905e+34 | 9.85121e-05 | 0.499828 | 0.499828 |
| 52 | 4.88779e-05 | 1.47539e-16 | 0 | 1.88905e+34 | 6.61595e-05 | 0.499864 | 0.499864 |
| 53 | 3.28225e-05 | 3.62409e-16 | 0 | 1.88905e+34 | 4.443e-05 | 0.499892 | 0.499892 |
| 54 | 2.20395e-05 | 2.64879e-16 | 0 | 1.88905e+34 | 2.98356e-05 | 0.499914 | 0.499914 |
| 55 | 1.47979e-05 | 1.76537e-16 | 0 | 1.88905e+34 | 2.00339e-05 | 0.499932 | 0.499932 |
| 56 | 9.93506e-06 | 2.34231e-16 | 0 | 1.88905e+34 | 1.34513e-05 | 0.499945 | 0.499945 |

////////////////////////////////////

Settings:

Matrix implementation:NATIVE

Matrix factorization:LU

Interior point method:CLASSIC PRIMAL DUAL

Search direction:IDENTITY MINUS SQUARE ROOT

Initializer:ALLONEINIT

theta = 0.1 rho = 0.95 eps = 1e-05

Task characteristics:

Name:Csizmadia Zsolt's matrix

Size:100

Number of iterations: 56

CPU time: 5.238 seconds

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| iteration | gap | feasibility | local kappa | lower bound of the handicap | mu | alpha_x | alpha_s |
|-----------|----------|-------------|-------------|-----------------------------|----------|-------------|-------------|
| 1 | 0.974015 | 3.10103e-16 | 1.88905e+34 | 1.88905e+34 | 0.9 | 7.37896e-17 | 7.37896e-17 |
| 2 | 0.962297 | 1.42396e-16 | 3.54204e+33 | 1.88905e+34 | 0.88538 | 1.269e-16 | 1.269e-16 |
| 3 | 0.938349 | 1.41932e-16 | 7.16966e+32 | 1.88905e+34 | 0.874728 | 3.68932e-16 | 3.68932e-16 |
| 4 | 0.912246 | 1.43155e-16 | 8.09959e+31 | 1.88905e+34 | 0.852959 | 9.76314e-16 | 9.76314e-16 |
| 5 | 0.885462 | 2.26862e-16 | 8.52291e+30 | 1.88905e+34 | 0.829232 | 2.62514e-15 | 2.62514e-15 |
| 6 | 0.858121 | 1.89766e-16 | 8.77445e+29 | 1.88905e+34 | 0.804885 | 7.23488e-15 | 7.23488e-15 |
| 7 | 0.831369 | 3.44147e-16 | 8.85048e+28 | 1.88905e+34 | 0.780032 | 1.99872e-14 | 1.99872e-14 |
| 8 | 0.804805 | 6.85381e-16 | 9.13036e+27 | 1.88905e+34 | 0.755714 | 5.58372e-14 | 5.58372e-14 |
| 9 | 0.778142 | 2.53898e-16 | 9.50523e+26 | 1.88905e+34 | 0.731568 | 1.57781e-13 | 1.57781e-13 |
| 10 | 0.751177 | 4.84065e-16 | 9.87529e+25 | 1.88905e+34 | 0.707331 | 4.51506e-13 | 4.51506e-13 |
| 11 | 0.723765 | 2.62562e-16 | 1.01493e+25 | 1.88905e+34 | 0.68282 | 1.31029e-12 | 1.31029e-12 |
| 12 | 0.696833 | 2.55049e-16 | 1.02482e+24 | 1.88905e+34 | 0.657903 | 3.78949e-12 | 3.78949e-12 |
| 13 | 0.670192 | 1.47675e-16 | 1.05284e+23 | 1.88905e+34 | 0.633421 | 1.09736e-11 | 1.09736e-11 |
| 14 | 0.643498 | 1.60447e-16 | 1.09482e+22 | 1.88905e+34 | 0.609204 | 3.1952e-11 | 3.1952e-11 |
| 15 | 0.616536 | 1.03906e-16 | 1.13779e+21 | 1.88905e+34 | 0.58494 | 9.37892e-11 | 9.37892e-11 |
| 16 | 0.589148 | 1.23181e-16 | 1.17101e+20 | 1.88905e+34 | 0.560431 | 2.78223e-10 | 2.78223e-10 |
| 17 | 0.5621 | 9.33595e-17 | 1.185e+19 | 1.88905e+34 | 0.535536 | 8.22563e-10 | 8.22563e-10 |
| 18 | 0.535422 | 1.21319e-16 | 1.21337e+18 | 1.88905e+34 | 0.510949 | 2.42465e-09 | 2.42465e-09 |
| 19 | 0.508725 | 2.70797e-16 | 1.26077e+17 | 1.88905e+34 | 0.486698 | 7.16895e-09 | 7.16895e-09 |
| 20 | 0.481785 | 2.23732e-16 | 1.31084e+16 | 1.88905e+34 | 0.462431 | 2.13261e-08 | 2.13261e-08 |
| 21 | 0.454435 | 1.92647e-16 | 1.35105e+15 | 1.88905e+34 | 0.437942 | 6.40147e-08 | 6.40147e-08 |
| 22 | 0.427288 | 9.71909e-17 | 1.37013e+14 | 1.88905e+34 | 0.413081 | 1.91787e-07 | 1.91787e-07 |
| 23 | 0.400581 | 1.16696e-16 | 1.3985e+13 | 1.88905e+34 | 0.388405 | 5.71387e-07 | 5.71387e-07 |
| 24 | 0.373888 | 1.79471e-16 | 1.45201e+12 | 1.88905e+34 | 0.364128 | 1.70516e-06 | 1.70516e-06 |
| 25 | 0.346974 | 1.86589e-16 | 1.51027e+11 | 1.88905e+34 | 0.339864 | 5.11379e-06 | 5.11379e-06 |
| 26 | 0.319667 | 8.63671e-17 | 1.55879e+10 | 1.88905e+34 | 0.3154 | 1.54604e-05 | 1.54604e-05 |
| 27 | 0.292427 | 1.14913e-16 | 1.58433e+09 | 1.88905e+34 | 0.290578 | 4.67403e-05 | 4.67403e-05 |
| 28 | 0.2657 | 1.26391e-16 | 1.61268e+08 | 1.88905e+34 | 0.265816 | 0.000140218 | 0.000140218 |
| 29 | 0.239025 | 2.21482e-16 | 1.67485e+07 | 1.88905e+34 | 0.241521 | 0.00042073 | 0.00042073 |
| 30 | 0.212185 | 1.62756e-16 | 118032 | 1.88905e+34 | 0.217274 | 0.00126583 | 0.00126583 |
| 31 | 0.185065 | 1.84042e-16 | 29076.7 | 1.88905e+34 | 0.192876 | 0.0038225 | 0.0038225 |
| 32 | 0.158235 | 1.57977e-16 | 1142.77 | 1.88905e+34 | 0.168224 | 0.011444 | 0.011444 |
| 33 | 0.13297 | 2.26492e-16 | 106.544 | 1.88905e+34 | 0.143835 | 0.0330526 | 0.0330526 |

| | | | | | | | |
|----|------------|-------------|------------|-------------|------------|-----------|-----------|
| 34 | 0.110268 | 1.87193e-16 | 24.2393 | 1.88905e+34 | 0.12087 | 0.0899682 | 0.0899682 |
| 35 | 0.0921339 | 2.41931e-16 | 7.70838 | 1.88905e+34 | 0.100234 | 0.221679 | 0.221679 |
| 36 | 0.0813812 | 1.36436e-16 | 2.37662 | 1.88905e+34 | 0.0837497 | 0.446558 | 0.446558 |
| 37 | 0.0739979 | 9.58866e-17 | 0.444085 | 1.88905e+34 | 0.0739755 | 0.772744 | 0.772744 |
| 38 | 0.0671212 | 8.91285e-17 | 0 | 1.88905e+34 | 0.0672641 | 1 | 1 |
| 39 | 0.060747 | 9.59359e-17 | 0 | 1.88905e+34 | 0.0610131 | 1 | 1 |
| 40 | 0.0549687 | 1.06898e-16 | 0.422907 | 1.88905e+34 | 0.055219 | 1 | 1 |
| 41 | 0.0497407 | 9.46807e-17 | 0.948155 | 1.88905e+34 | 0.0499665 | 1 | 1 |
| 42 | 0.0450106 | 7.56923e-17 | 0.988196 | 1.88905e+34 | 0.0452143 | 1 | 1 |
| 43 | 0.0407307 | 8.79789e-17 | 0.905296 | 1.88905e+34 | 0.0409146 | 1 | 1 |
| 44 | 0.0368581 | 5.94519e-17 | 0.816674 | 1.88905e+34 | 0.0370242 | 1 | 1 |
| 45 | 0.033354 | 1.06553e-16 | 0.7348 | 1.88905e+34 | 0.033504 | 1 | 1 |
| 46 | 0.0301833 | 9.23216e-17 | 0.660121 | 1.88905e+34 | 0.0303188 | 1 | 1 |
| 47 | 0.0273142 | 6.20673e-17 | 0.592007 | 1.88905e+34 | 0.0274366 | 1 | 1 |
| 48 | 0.0247179 | 1.01608e-16 | 0.529803 | 1.88905e+34 | 0.0248286 | 1 | 1 |
| 49 | 0.0223686 | 1.07412e-16 | 0.472921 | 1.88905e+34 | 0.0224686 | 1 | 1 |
| 50 | 0.0202427 | 8.74464e-17 | 0.420838 | 1.88905e+34 | 0.0203331 | 1 | 1 |
| 51 | 0.0183189 | 1.0078e-16 | 0.37309 | 1.88905e+34 | 0.0184006 | 1 | 1 |
| 52 | 0.0165781 | 1.02054e-16 | 0.329263 | 1.88905e+34 | 0.0166519 | 1 | 1 |
| 53 | 0.0150027 | 9.25409e-17 | 0.288989 | 1.88905e+34 | 0.0150695 | 1 | 1 |
| 54 | 0.0135771 | 9.95849e-17 | 0.251939 | 1.88905e+34 | 0.0136374 | 1 | 1 |
| 55 | 0.012287 | 1.32376e-16 | 0.217817 | 1.88905e+34 | 0.0123416 | 1 | 1 |
| 56 | 0.0111195 | 8.81893e-17 | 0.18636 | 1.88905e+34 | 0.0111689 | 1 | 1 |
| 57 | 0.010063 | 8.26612e-17 | 0.157328 | 1.88905e+34 | 0.0101076 | 1 | 1 |
| 58 | 0.00910686 | 8.61127e-17 | 0.130508 | 1.88905e+34 | 0.00914724 | 1 | 1 |
| 59 | 0.00824162 | 7.3842e-17 | 0.105708 | 1.88905e+34 | 0.00827814 | 1 | 1 |
| 60 | 0.0074586 | 7.95929e-17 | 0.0827546 | 1.88905e+34 | 0.00749163 | 1 | 1 |
| 61 | 0.00674999 | 8.49193e-17 | 0.0614897 | 1.88905e+34 | 0.00677987 | 1 | 1 |
| 62 | 0.00610872 | 1.32996e-16 | 0.0417719 | 1.88905e+34 | 0.00613574 | 1 | 1 |
| 63 | 0.00552837 | 9.23378e-17 | 0.0234726 | 1.88905e+34 | 0.00555282 | 1 | 1 |
| 64 | 0.00500317 | 8.97167e-17 | 0.00647529 | 1.88905e+34 | 0.00502529 | 1 | 1 |
| 65 | 0.00452788 | 9.0623e-17 | 0 | 1.88905e+34 | 0.00454789 | 1 | 1 |
| 66 | 0.00409774 | 8.5228e-17 | 0 | 1.88905e+34 | 0.00411584 | 1 | 1 |
| 67 | 0.00370847 | 1.09368e-16 | 0 | 1.88905e+34 | 0.00372485 | 1 | 1 |
| 68 | 0.00335618 | 8.36973e-17 | 0 | 1.88905e+34 | 0.003371 | 1 | 1 |

| | | | | | | | |
|-----|-------------|-------------|---|-------------|-------------|---|---|
| 69 | 0.00303736 | 1.01369e-16 | 0 | 1.88905e+34 | 0.00305077 | 1 | 1 |
| 70 | 0.00274884 | 7.68215e-17 | 0 | 1.88905e+34 | 0.00276096 | 1 | 1 |
| 71 | 0.00248772 | 1.05773e-16 | 0 | 1.88905e+34 | 0.00249869 | 1 | 1 |
| 72 | 0.00225141 | 1.0151e-16 | 0 | 1.88905e+34 | 0.00226134 | 1 | 1 |
| 73 | 0.00203755 | 1.12831e-16 | 0 | 1.88905e+34 | 0.00204653 | 1 | 1 |
| 74 | 0.001844 | 7.7086e-17 | 0 | 1.88905e+34 | 0.00185213 | 1 | 1 |
| 75 | 0.00166884 | 7.7183e-17 | 0 | 1.88905e+34 | 0.0016762 | 1 | 1 |
| 76 | 0.00151032 | 9.34813e-17 | 0 | 1.88905e+34 | 0.00151698 | 1 | 1 |
| 77 | 0.00136686 | 9.40422e-17 | 0 | 1.88905e+34 | 0.00137288 | 1 | 1 |
| 78 | 0.00123703 | 8.38402e-17 | 0 | 1.88905e+34 | 0.00124248 | 1 | 1 |
| 79 | 0.00111953 | 9.61974e-17 | 0 | 1.88905e+34 | 0.00112446 | 1 | 1 |
| 80 | 0.00101319 | 1.00256e-16 | 0 | 1.88905e+34 | 0.00101765 | 1 | 1 |
| 81 | 0.00091695 | 7.04372e-17 | 0 | 1.88905e+34 | 0.000920987 | 1 | 1 |
| 82 | 0.000829854 | 8.35542e-17 | 0 | 1.88905e+34 | 0.000833507 | 1 | 1 |
| 83 | 0.000751031 | 8.13621e-17 | 0 | 1.88905e+34 | 0.000754337 | 1 | 1 |
| 84 | 0.000679695 | 6.49371e-17 | 0 | 1.88905e+34 | 0.000682687 | 1 | 1 |
| 85 | 0.000615135 | 9.5995e-17 | 0 | 1.88905e+34 | 0.000617843 | 1 | 1 |
| 86 | 0.000556708 | 8.5105e-17 | 0 | 1.88905e+34 | 0.000559158 | 1 | 1 |
| 87 | 0.00050383 | 8.54559e-17 | 0 | 1.88905e+34 | 0.000506048 | 1 | 1 |
| 88 | 0.000455976 | 7.53356e-17 | 0 | 1.88905e+34 | 0.000457982 | 1 | 1 |
| 89 | 0.000412666 | 9.31638e-17 | 0 | 1.88905e+34 | 0.000414482 | 1 | 1 |
| 90 | 0.00037347 | 9.53349e-17 | 0 | 1.88905e+34 | 0.000375114 | 1 | 1 |
| 91 | 0.000337998 | 7.37244e-17 | 0 | 1.88905e+34 | 0.000339485 | 1 | 1 |
| 92 | 0.000305894 | 8.6372e-17 | 0 | 1.88905e+34 | 0.00030724 | 1 | 1 |
| 93 | 0.00027684 | 1.06124e-16 | 0 | 1.88905e+34 | 0.000278058 | 1 | 1 |
| 94 | 0.000250546 | 1.19624e-16 | 0 | 1.88905e+34 | 0.000251648 | 1 | 1 |
| 95 | 0.000226749 | 9.44867e-17 | 0 | 1.88905e+34 | 0.000227746 | 1 | 1 |
| 96 | 0.000205212 | 7.9234e-17 | 0 | 1.88905e+34 | 0.000206115 | 1 | 1 |
| 97 | 0.000185721 | 8.9131e-17 | 0 | 1.88905e+34 | 0.000186538 | 1 | 1 |
| 98 | 0.000168081 | 9.48163e-17 | 0 | 1.88905e+34 | 0.000168821 | 1 | 1 |
| 99 | 0.000152117 | 9.40042e-17 | 0 | 1.88905e+34 | 0.000152786 | 1 | 1 |
| 100 | 0.000137669 | 8.37405e-17 | 0 | 1.88905e+34 | 0.000138274 | 1 | 1 |
| 101 | 0.000124593 | 8.13476e-17 | 0 | 1.88905e+34 | 0.000125141 | 1 | 1 |
| 102 | 0.00011276 | 8.49228e-17 | 0 | 1.88905e+34 | 0.000113255 | 1 | 1 |
| 103 | 0.00010205 | 8.80373e-17 | 0 | 1.88905e+34 | 0.000102499 | 1 | 1 |

| | | | | | | | |
|-----|-------------|-------------|---|-------------|-------------|---|---|
| 104 | 9.23573e-05 | 7.77393e-17 | 0 | 1.88905e+34 | 9.27633e-05 | 1 | 1 |
| 105 | 8.35853e-05 | 1.09422e-16 | 0 | 1.88905e+34 | 8.39528e-05 | 1 | 1 |
| 106 | 7.56465e-05 | 9.59484e-17 | 0 | 1.88905e+34 | 7.59791e-05 | 1 | 1 |
| 107 | 6.84617e-05 | 1.03358e-16 | 0 | 1.88905e+34 | 6.87627e-05 | 1 | 1 |
| 108 | 6.19594e-05 | 8.81318e-17 | 0 | 1.88905e+34 | 6.22317e-05 | 1 | 1 |
| 109 | 5.60746e-05 | 1.04179e-16 | 0 | 1.88905e+34 | 5.63211e-05 | 1 | 1 |
| 110 | 5.07487e-05 | 7.89777e-17 | 0 | 1.88905e+34 | 5.09718e-05 | 1 | 1 |
| 111 | 4.59287e-05 | 8.88991e-17 | 0 | 1.88905e+34 | 4.61306e-05 | 1 | 1 |
| 112 | 4.15665e-05 | 8.04598e-17 | 0 | 1.88905e+34 | 4.17492e-05 | 1 | 1 |
| 113 | 3.76186e-05 | 9.32152e-17 | 0 | 1.88905e+34 | 3.77839e-05 | 1 | 1 |
| 114 | 3.40457e-05 | 8.66626e-17 | 0 | 1.88905e+34 | 3.41953e-05 | 1 | 1 |
| 115 | 3.08121e-05 | 7.79287e-17 | 0 | 1.88905e+34 | 3.09475e-05 | 1 | 1 |
| 116 | 2.78856e-05 | 7.49333e-17 | 0 | 1.88905e+34 | 2.80082e-05 | 1 | 1 |
| 117 | 2.52371e-05 | 9.11342e-17 | 0 | 1.88905e+34 | 2.5348e-05 | 1 | 1 |
| 118 | 2.28402e-05 | 8.77473e-17 | 0 | 1.88905e+34 | 2.29405e-05 | 1 | 1 |
| 119 | 2.06709e-05 | 7.01605e-17 | 0 | 1.88905e+34 | 2.07617e-05 | 1 | 1 |
| 120 | 1.87076e-05 | 9.84097e-17 | 0 | 1.88905e+34 | 1.87898e-05 | 1 | 1 |
| 121 | 1.69308e-05 | 7.8654e-17 | 0 | 1.88905e+34 | 1.70052e-05 | 1 | 1 |
| 122 | 1.53228e-05 | 9.57835e-17 | 0 | 1.88905e+34 | 1.53901e-05 | 1 | 1 |
| 123 | 1.38674e-05 | 8.39116e-17 | 0 | 1.88905e+34 | 1.39284e-05 | 1 | 1 |
| 124 | 1.25504e-05 | 7.66382e-17 | 0 | 1.88905e+34 | 1.26055e-05 | 1 | 1 |
| 125 | 1.13584e-05 | 7.88364e-17 | 0 | 1.88905e+34 | 1.14083e-05 | 1 | 1 |
| 126 | 1.02796e-05 | 9.55324e-17 | 0 | 1.88905e+34 | 1.03247e-05 | 1 | 1 |
| 127 | 9.30325e-06 | 1.1787e-16 | 0 | 1.88905e+34 | 9.34413e-06 | 1 | 1 |

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Settings:

Matrix implementation:NATIVE

Matrix factorization:LU

Interior point method:CLASSIC PRIMAL DUAL

Search direction:CLASSIC

Initializer:ALLONEINIT

theta = 0.1 rho = 0.95 eps = 1e-05

Task characteristics:
 Name:Csizmadia Zsolt's matrix
 Size:100

Number of iterations: 127
 CPU time: 11.51 seconds

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| iteration | gap | feasibility | local kappa | lower bound of the handicap | mu | alpha_x | alpha_s |
|-----------|----------|-------------|-------------|-----------------------------|----------|-------------|-------------|
| 1 | 0.974015 | 3.10222e-16 | 1.88905e+34 | 1.88905e+34 | 0.9 | 7.18963e-17 | 7.18963e-17 |
| 2 | 0.962297 | 1.42062e-16 | 3.54204e+33 | 1.88905e+34 | 0.88538 | 1.23153e-16 | 1.23153e-16 |
| 3 | 0.938349 | 1.43011e-16 | 7.16966e+32 | 1.88905e+34 | 0.874728 | 3.56992e-16 | 3.56992e-16 |
| 4 | 0.912246 | 1.43942e-16 | 8.09959e+31 | 1.88905e+34 | 0.852959 | 9.38998e-16 | 9.38998e-16 |
| 5 | 0.885462 | 2.34334e-16 | 8.52291e+30 | 1.88905e+34 | 0.829232 | 2.50782e-15 | 2.50782e-15 |
| 6 | 0.858121 | 1.83993e-16 | 8.77445e+29 | 1.88905e+34 | 0.804885 | 6.86284e-15 | 6.86284e-15 |
| 7 | 0.831369 | 3.0554e-16 | 8.85048e+28 | 1.88905e+34 | 0.780032 | 1.88198e-14 | 1.88198e-14 |
| 8 | 0.804805 | 6.69741e-16 | 9.13036e+27 | 1.88905e+34 | 0.755714 | 5.21887e-14 | 5.21887e-14 |
| 9 | 0.778142 | 2.6232e-16 | 9.50523e+26 | 1.88905e+34 | 0.731568 | 1.46367e-13 | 1.46367e-13 |
| 10 | 0.751177 | 5.21964e-16 | 9.87529e+25 | 1.88905e+34 | 0.707331 | 4.15618e-13 | 4.15618e-13 |
| 11 | 0.723765 | 3.07699e-16 | 1.01493e+25 | 1.88905e+34 | 0.68282 | 1.19651e-12 | 1.19651e-12 |
| 12 | 0.696833 | 2.74373e-16 | 1.02482e+24 | 1.88905e+34 | 0.657903 | 3.43159e-12 | 3.43159e-12 |
| 13 | 0.670192 | 2.4589e-16 | 1.05284e+23 | 1.88905e+34 | 0.633421 | 9.85362e-12 | 9.85362e-12 |
| 14 | 0.643498 | 1.50473e-16 | 1.09482e+22 | 1.88905e+34 | 0.609204 | 2.84455e-11 | 2.84455e-11 |
| 15 | 0.616536 | 1.03986e-16 | 1.13779e+21 | 1.88905e+34 | 0.58494 | 8.27602e-11 | 8.27602e-11 |
| 16 | 0.589148 | 2.74362e-16 | 1.17101e+20 | 1.88905e+34 | 0.560431 | 2.43253e-10 | 2.43253e-10 |
| 17 | 0.5621 | 1.04608e-16 | 1.185e+19 | 1.88905e+34 | 0.535536 | 7.12259e-10 | 7.12259e-10 |
| 18 | 0.535422 | 6.7861e-17 | 1.21337e+18 | 1.88905e+34 | 0.510949 | 2.07891e-09 | 2.07891e-09 |
| 19 | 0.508725 | 9.72694e-17 | 1.26077e+17 | 1.88905e+34 | 0.486698 | 6.08514e-09 | 6.08514e-09 |
| 20 | 0.481785 | 1.94458e-16 | 1.31084e+16 | 1.88905e+34 | 0.462431 | 1.79142e-08 | 1.79142e-08 |
| 21 | 0.454435 | 1.51831e-16 | 1.35105e+15 | 1.88905e+34 | 0.437942 | 5.31889e-08 | 5.31889e-08 |
| 22 | 0.427288 | 3.00863e-16 | 1.37013e+14 | 1.88905e+34 | 0.413081 | 1.57526e-07 | 1.57526e-07 |

| | | | | | | | |
|----|------------|-------------|-------------|-------------|------------|-------------|-------------|
| 23 | 0.400581 | 9.85068e-17 | 1.3985e+13 | 1.88905e+34 | 0.388405 | 4.63744e-07 | 4.63744e-07 |
| 24 | 0.373888 | 1.3297e-16 | 1.45201e+12 | 1.88905e+34 | 0.364128 | 1.36705e-06 | 1.36705e-06 |
| 25 | 0.346973 | 1.0596e-16 | 1.51028e+11 | 1.88905e+34 | 0.339864 | 4.04751e-06 | 4.04751e-06 |
| 26 | 0.319665 | 1.07394e-16 | 1.5588e+10 | 1.88905e+34 | 0.315399 | 1.20715e-05 | 1.20715e-05 |
| 27 | 0.292419 | 1.46804e-16 | 1.58436e+09 | 1.88905e+34 | 0.290575 | 3.59679e-05 | 3.59679e-05 |
| 28 | 0.265676 | 1.76392e-16 | 1.61275e+08 | 1.88905e+34 | 0.265809 | 0.000106256 | 0.000106256 |
| 29 | 0.23896 | 1.12292e-16 | 1.67502e+07 | 1.88905e+34 | 0.2415 | 0.000313753 | 0.000313753 |
| 30 | 0.212006 | 1.08948e-16 | 1.74837e+06 | 1.88905e+34 | 0.217215 | 0.000927978 | 0.000927978 |
| 31 | 0.184587 | 1.21817e-16 | 168414 | 1.88905e+34 | 0.192714 | 0.002751 | 0.002751 |
| 32 | 0.156965 | 1.20286e-16 | 15996.1 | 1.88905e+34 | 0.16779 | 0.0080761 | 0.0080761 |
| 33 | 0.129862 | 1.28474e-16 | 733.348 | 1.88905e+34 | 0.142681 | 0.0228552 | 0.0228552 |
| 34 | 0.103496 | 1.22917e-16 | 73.4397 | 1.88905e+34 | 0.118045 | 0.0610089 | 0.0610089 |
| 35 | 0.0799079 | 1.71524e-16 | 14.3204 | 1.88905e+34 | 0.0940781 | 0.147581 | 0.147581 |
| 36 | 0.0644286 | 2.74838e-16 | 2.99075 | 1.88905e+34 | 0.0726363 | 0.296747 | 0.296747 |
| 37 | 0.0563099 | 1.81543e-16 | 0.478091 | 1.88905e+34 | 0.0585656 | 0.521197 | 0.521197 |
| 38 | 0.0500441 | 8.74911e-17 | 0 | 1.88905e+34 | 0.0511857 | 1 | 1 |
| 39 | 0.0450539 | 9.57523e-17 | 0 | 1.88905e+34 | 0.0454901 | 1 | 1 |
| 40 | 0.0406557 | 8.3976e-17 | 0.188393 | 1.88905e+34 | 0.040954 | 1 | 1 |
| 41 | 0.0366885 | 8.96109e-17 | 0.793599 | 1.88905e+34 | 0.0369561 | 1 | 1 |
| 42 | 0.0331086 | 8.92896e-17 | 0.729845 | 1.88905e+34 | 0.0333498 | 1 | 1 |
| 43 | 0.0298783 | 8.48832e-17 | 0.6539 | 1.88905e+34 | 0.0300957 | 1 | 1 |
| 44 | 0.0269633 | 9.87882e-17 | 0.584553 | 1.88905e+34 | 0.0271593 | 1 | 1 |
| 45 | 0.0243329 | 9.45381e-17 | 0.52136 | 1.88905e+34 | 0.0245097 | 1 | 1 |
| 46 | 0.0219593 | 8.15238e-17 | 0.463706 | 1.88905e+34 | 0.0221186 | 1 | 1 |
| 47 | 0.0198173 | 1.08678e-16 | 0.411033 | 1.88905e+34 | 0.019961 | 1 | 1 |
| 48 | 0.0178844 | 1.01558e-16 | 0.362848 | 1.88905e+34 | 0.0180139 | 1 | 1 |
| 49 | 0.01614 | 8.51156e-17 | 0.318714 | 1.88905e+34 | 0.0162569 | 1 | 1 |
| 50 | 0.0145659 | 1.05182e-16 | 0.278241 | 1.88905e+34 | 0.0146713 | 1 | 1 |
| 51 | 0.0131454 | 1.01793e-16 | 0.241082 | 1.88905e+34 | 0.0132404 | 1 | 1 |
| 52 | 0.0118634 | 8.69943e-17 | 0.206927 | 1.88905e+34 | 0.0119491 | 1 | 1 |
| 53 | 0.0107065 | 1.00756e-16 | 0.175497 | 1.88905e+34 | 0.0107838 | 1 | 1 |
| 54 | 0.00966242 | 1.02136e-16 | 0.146545 | 1.88905e+34 | 0.00973219 | 1 | 1 |
| 55 | 0.0087202 | 8.91042e-17 | 0.119848 | 1.88905e+34 | 0.00878314 | 1 | 1 |
| 56 | 0.00786989 | 7.81386e-17 | 0.0952046 | 1.88905e+34 | 0.00792667 | 1 | 1 |
| 57 | 0.0071025 | 9.14915e-17 | 0.0724347 | 1.88905e+34 | 0.00715373 | 1 | 1 |

| | | | | | | | |
|----|-------------|-------------|-----------|-------------|-------------|---|---|
| 58 | 0.00640996 | 8.69016e-17 | 0.0513756 | 1.88905e+34 | 0.00645617 | 1 | 1 |
| 59 | 0.00578495 | 8.9503e-17 | 0.0318807 | 1.88905e+34 | 0.00582665 | 1 | 1 |
| 60 | 0.0052209 | 1.09272e-16 | 0.0138172 | 1.88905e+34 | 0.00525852 | 1 | 1 |
| 61 | 0.00471186 | 8.06565e-17 | 0 | 1.88905e+34 | 0.0047458 | 1 | 1 |
| 62 | 0.00425245 | 1.00899e-16 | 0 | 1.88905e+34 | 0.00428308 | 1 | 1 |
| 63 | 0.00383784 | 8.83048e-17 | 0 | 1.88905e+34 | 0.00386548 | 1 | 1 |
| 64 | 0.00346367 | 1.02382e-16 | 0 | 1.88905e+34 | 0.0034886 | 1 | 1 |
| 65 | 0.00312597 | 1.05967e-16 | 0 | 1.88905e+34 | 0.00314847 | 1 | 1 |
| 66 | 0.00282121 | 1.0016e-16 | 0 | 1.88905e+34 | 0.00284151 | 1 | 1 |
| 67 | 0.00254616 | 7.76317e-17 | 0 | 1.88905e+34 | 0.00256448 | 1 | 1 |
| 68 | 0.00229793 | 8.22401e-17 | 0 | 1.88905e+34 | 0.00231446 | 1 | 1 |
| 69 | 0.0020739 | 7.91584e-17 | 0 | 1.88905e+34 | 0.00208881 | 1 | 1 |
| 70 | 0.00187171 | 7.27316e-17 | 0 | 1.88905e+34 | 0.00188517 | 1 | 1 |
| 71 | 0.00168924 | 1.08424e-16 | 0 | 1.88905e+34 | 0.00170139 | 1 | 1 |
| 72 | 0.00152456 | 8.21821e-17 | 0 | 1.88905e+34 | 0.00153552 | 1 | 1 |
| 73 | 0.00137593 | 7.57429e-17 | 0 | 1.88905e+34 | 0.00138582 | 1 | 1 |
| 74 | 0.00124179 | 8.58995e-17 | 0 | 1.88905e+34 | 0.00125072 | 1 | 1 |
| 75 | 0.00112073 | 9.28549e-17 | 0 | 1.88905e+34 | 0.00112879 | 1 | 1 |
| 76 | 0.00101148 | 1.10155e-16 | 0 | 1.88905e+34 | 0.00101875 | 1 | 1 |
| 77 | 0.000912873 | 9.04079e-17 | 0 | 1.88905e+34 | 0.000919433 | 1 | 1 |
| 78 | 0.000823881 | 7.91546e-17 | 0 | 1.88905e+34 | 0.000829802 | 1 | 1 |
| 79 | 0.000743565 | 8.91579e-17 | 0 | 1.88905e+34 | 0.000748908 | 1 | 1 |
| 80 | 0.000671079 | 1.01759e-16 | 0 | 1.88905e+34 | 0.000675901 | 1 | 1 |
| 81 | 0.00060566 | 7.70598e-17 | 0 | 1.88905e+34 | 0.000610011 | 1 | 1 |
| 82 | 0.000546618 | 6.43944e-17 | 0 | 1.88905e+34 | 0.000550545 | 1 | 1 |
| 83 | 0.000493332 | 9.24376e-17 | 0 | 1.88905e+34 | 0.000496875 | 1 | 1 |
| 84 | 0.00044524 | 8.19487e-17 | 0 | 1.88905e+34 | 0.000448438 | 1 | 1 |
| 85 | 0.000401837 | 8.18315e-17 | 0 | 1.88905e+34 | 0.000404723 | 1 | 1 |
| 86 | 0.000362665 | 9.83479e-17 | 0 | 1.88905e+34 | 0.00036527 | 1 | 1 |
| 87 | 0.000327312 | 7.73495e-17 | 0 | 1.88905e+34 | 0.000329663 | 1 | 1 |
| 88 | 0.000295405 | 1.07974e-16 | 0 | 1.88905e+34 | 0.000297526 | 1 | 1 |
| 89 | 0.000266608 | 9.15983e-17 | 0 | 1.88905e+34 | 0.000268523 | 1 | 1 |
| 90 | 0.000240619 | 7.57113e-17 | 0 | 1.88905e+34 | 0.000242347 | 1 | 1 |
| 91 | 0.000217163 | 9.79242e-17 | 0 | 1.88905e+34 | 0.000218723 | 1 | 1 |
| 92 | 0.000195994 | 8.00466e-17 | 0 | 1.88905e+34 | 0.000197401 | 1 | 1 |

| | | | | | | | |
|-----|-------------|-------------|---|-------------|-------------|---|---|
| 93 | 0.000176888 | 6.90285e-17 | 0 | 1.88905e+34 | 0.000178159 | 1 | 1 |
| 94 | 0.000159645 | 9.27485e-17 | 0 | 1.88905e+34 | 0.000160792 | 1 | 1 |
| 95 | 0.000144083 | 1.46798e-16 | 0 | 1.88905e+34 | 0.000145118 | 1 | 1 |
| 96 | 0.000130038 | 8.55539e-17 | 0 | 1.88905e+34 | 0.000130972 | 1 | 1 |
| 97 | 0.000117362 | 8.81995e-17 | 0 | 1.88905e+34 | 0.000118204 | 1 | 1 |
| 98 | 0.000105921 | 6.873e-17 | 0 | 1.88905e+34 | 0.000106682 | 1 | 1 |
| 99 | 9.55963e-05 | 8.6704e-17 | 0 | 1.88905e+34 | 9.62826e-05 | 1 | 1 |
| 100 | 8.62776e-05 | 9.76026e-17 | 0 | 1.88905e+34 | 8.6897e-05 | 1 | 1 |
| 101 | 7.78674e-05 | 8.17586e-17 | 0 | 1.88905e+34 | 7.84264e-05 | 1 | 1 |
| 102 | 7.02769e-05 | 8.47491e-17 | 0 | 1.88905e+34 | 7.07814e-05 | 1 | 1 |
| 103 | 6.34264e-05 | 1.01005e-16 | 0 | 1.88905e+34 | 6.38817e-05 | 1 | 1 |
| 104 | 5.72437e-05 | 8.88856e-17 | 0 | 1.88905e+34 | 5.76546e-05 | 1 | 1 |
| 105 | 5.16636e-05 | 8.59413e-17 | 0 | 1.88905e+34 | 5.20345e-05 | 1 | 1 |
| 106 | 4.66275e-05 | 7.44193e-17 | 0 | 1.88905e+34 | 4.69622e-05 | 1 | 1 |
| 107 | 4.20824e-05 | 1.12241e-16 | 0 | 1.88905e+34 | 4.23844e-05 | 1 | 1 |
| 108 | 3.79802e-05 | 9.33525e-17 | 0 | 1.88905e+34 | 3.82529e-05 | 1 | 1 |
| 109 | 3.4278e-05 | 8.29216e-17 | 0 | 1.88905e+34 | 3.4524e-05 | 1 | 1 |
| 110 | 3.09366e-05 | 9.77259e-17 | 0 | 1.88905e+34 | 3.11587e-05 | 1 | 1 |
| 111 | 2.7921e-05 | 9.56115e-17 | 0 | 1.88905e+34 | 2.81214e-05 | 1 | 1 |
| 112 | 2.51993e-05 | 8.45547e-17 | 0 | 1.88905e+34 | 2.53802e-05 | 1 | 1 |
| 113 | 2.27429e-05 | 9.97978e-17 | 0 | 1.88905e+34 | 2.29062e-05 | 1 | 1 |
| 114 | 2.0526e-05 | 8.92753e-17 | 0 | 1.88905e+34 | 2.06733e-05 | 1 | 1 |
| 115 | 1.85252e-05 | 9.27864e-17 | 0 | 1.88905e+34 | 1.86581e-05 | 1 | 1 |
| 116 | 1.67194e-05 | 1.09815e-16 | 0 | 1.88905e+34 | 1.68394e-05 | 1 | 1 |
| 117 | 1.50896e-05 | 1.01372e-16 | 0 | 1.88905e+34 | 1.51979e-05 | 1 | 1 |
| 118 | 1.36187e-05 | 9.33652e-17 | 0 | 1.88905e+34 | 1.37164e-05 | 1 | 1 |
| 119 | 1.22912e-05 | 8.59457e-17 | 0 | 1.88905e+34 | 1.23794e-05 | 1 | 1 |
| 120 | 1.10931e-05 | 1.03591e-16 | 0 | 1.88905e+34 | 1.11727e-05 | 1 | 1 |
| 121 | 1.00117e-05 | 8.85212e-17 | 0 | 1.88905e+34 | 1.00836e-05 | 1 | 1 |
| 122 | 9.03582e-06 | 7.86283e-17 | 0 | 1.88905e+34 | 9.10068e-06 | 1 | 1 |

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Settings:
Matrix implementation:NATIVE

Matrix factorization:LU
Interior point method:CLASSIC PRIMAL DUAL
Search direction:SQUARE ROOT
Initializer:ALLONEINIT

theta = 0.1 rho = 0.95 eps = 1e-05

Task characteristics:
Name:Csizmadia Zsolt's matrix
Size:100

Number of iterations: 122
CPU time: 11.355 seconds

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