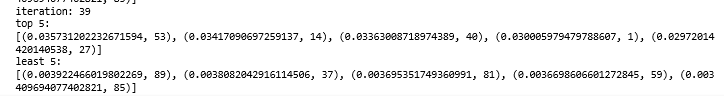
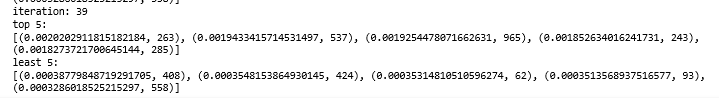
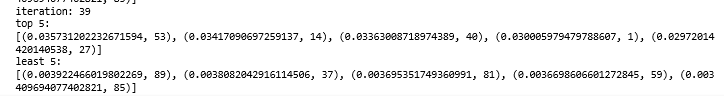
* 1. **A pdf file containing (30 points):**
  2. **• List of the top 5 node ids with the highest PageRank scores. Include the scores alongside the ids (10 points).**

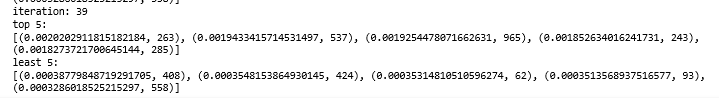
1. For small text file :
2. After 40 Iterartions

****

For Large test file :

****

* 1. **• List of the bottom 5 node ids with the lowest PageRank scores. Include the scores alongside the ids (10 points).**
  2. **for Small text file:**
  3. ****

1. **For Large text file :**
2. ****
   1. **• Output of your program for all 40 iterations (10 points)**

**For Small text file**

iteration: 0

top 5:

[(0.03558508158508159, 14), (0.03521478521478523, 53), (0.03472646569117157, 40), (0.03270352980352981, 66), (0.02996744693215281, 27)]

least 5:

[(0.004714285714285714, 89), (0.004399999999999999, 81), (0.004371428571428571, 67), (0.004342857142857143, 80), (0.004193939393939394, 23)]

iteration: 1

top 5:

[(0.03542563135651835, 53), (0.03539158367861755, 14), (0.03188035845509592, 40), (0.030828998325441573, 1), (0.02878530001010026, 27)]

least 5:

[(0.004076923396776877, 94), (0.003835806764042058, 59), (0.003828248048248048, 81), (0.0037009985569985563, 37), (0.0035550332769748645, 85)]

iteration: 2

top 5:

[(0.035684743348858065, 53), (0.033842192679993055, 14), (0.03369689889179288, 40), (0.030176247201275257, 1), (0.029780301125783403, 27)]

least 5:

[(0.003943276824540802, 89), (0.0038302151369957226, 37), (0.0037460861960445712, 81), (0.003687053068049854, 59), (0.0034481980696515623, 85)]

iteration: 3

top 5:

[(0.03580413635216582, 53), (0.034301497741809336, 14), (0.03355342434105517, 40), (0.029933751642311088, 1), (0.02975377598004715, 27)]

least 5:

[(0.0039285870611030105, 89), (0.0038405316248559976, 37), (0.003697813808554153, 81), (0.003650926500741842, 59), (0.003432886589482984, 85)]

iteration: 4

top 5:

[(0.035722013863569844, 53), (0.03417406318167556, 14), (0.033639074793711005, 40), (0.030035348041583435, 1), (0.029708586843704806, 27)]

least 5:

[(0.00392667812693956, 89), (0.0038049061764859277, 37), (0.003702155215328535, 81), (0.0036721661790518867, 59), (0.0034076872587132626, 85)]

iteration: 5

top 5:

[(0.035729807770309666, 53), (0.034164985638400695, 14), (0.03363131260887904, 40), (0.03000128863995867, 1), (0.02971952425591947, 27)]

least 5:

[(0.003922653860194877, 89), (0.0038092835229843977, 37), (0.0036962364418203528, 81), (0.003668930453240836, 59), (0.0034110560996399217, 85)]

iteration: 6

top 5:

[(0.03573170986543164, 53), (0.034172247117594076, 14), (0.03363015317349108, 40), (0.03000476528644686, 1), (0.029720910222433793, 27)]

least 5:

[(0.003922310996633475, 89), (0.0038083171894895953, 37), (0.0036955273084261176, 81), (0.003670090202692507, 59), (0.0034099204676107477, 85)]

iteration: 7

top 5:

[(0.03573069367565956, 53), (0.034170633942257944, 14), (0.033630268581562615, 40), (0.03000633526214068, 1), (0.029720188105857945, 27)]

least 5:

[(0.003922530659371662, 89), (0.0038080746609612704, 37), (0.0036953797382632088, 81), (0.0036698377112371573, 59), (0.003409646124811284, 85)]

iteration: 8

top 5:

[(0.035731217245217495, 53), (0.034170878948402005, 14), (0.03363012250967707, 40), (0.030005852114185258, 1), (0.029720147611027606, 27)]

least 5:

[(0.003922472179566316, 89), (0.0038082324623384726, 37), (0.003695351046148632, 81), (0.003669856264497596, 59), (0.003409696064912153, 85)]

iteration: 9

top 5:

[(0.03573119195317506, 53), (0.03417093570091833, 14), (0.03363005697429355, 40), (0.030005965626718003, 1), (0.029720153338967218, 27)]

least 5:

[(0.003922465435152918, 89), (0.003808201322261096, 37), (0.0036953529509727067, 81), (0.003669867799225394, 59), (0.003409696601587542, 85)]

iteration: 10

top 5:

[(0.03573120291281623, 53), (0.03417089949900003, 14), (0.03363009278593236, 40), (0.030005989052182904, 1), (0.029720145832441695, 27)]

least 5:

[(0.003922466016186361, 89), (0.0038082040942319043, 37), (0.003695351490724185, 81), (0.003669859841528567, 59), (0.0034096932188747483, 85)]

iteration: 11

top 5:

[(0.03573120149409199, 53), (0.03417090816473203, 14), (0.03363008503079427, 40), (0.030005976644955582, 1), (0.029720144260802408, 27)]

least 5:

[(0.003922466299864329, 89), (0.0038082046606181625, 37), (0.003695351622021695, 81), (0.003669860801923877, 59), (0.0034096944002086566, 85)]

iteration: 12

top 5:

[(0.035731202632570784, 53), (0.034170906906285985, 14), (0.033630087434245996, 40), (0.030005979893583636, 1), (0.02972014438860176, 27)]

least 5:

[(0.003922465951344798, 89), (0.003808204238457283, 37), (0.003695351794674155, 81), (0.003669860628845618, 59), (0.0034096940522523253, 85)]

iteration: 13

top 5:

[(0.035731202180902796, 53), (0.03417090706176395, 14), (0.03363008710657814, 40), (0.030005979465586873, 1), (0.029720144205127374, 27)]

least 5:

[(0.003922466035957519, 89), (0.0038082042918098297, 37), (0.0036953517348022077, 81), (0.0036698606382178705, 59), (0.00340969407244429, 85)]

iteration: 14

top 5:

[(0.035731202239220106, 53), (0.03417090694737344, 14), (0.03363008721789059, 40), (0.030005979491094535, 1), (0.029720144187701684, 27)]

least 5:

[(0.003922466018582067, 89), (0.0038082042966343876, 37), (0.0036953517515610898, 81), (0.0036698606602653043, 59), (0.0034096940794062966, 85)]

iteration: 15

top 5:

[(0.035731202235289625, 53), (0.03417090697951784, 14), (0.03363008718247177, 40), (0.030005979471277543, 1), (0.029720144204786355, 27)]

least 5:

[(0.003922466020160061, 89), (0.003808204290174807, 37), (0.0036953517494676914, 81), (0.0036698606597638547, 59), (0.0034096940775088943, 85)]

iteration: 16

top 5:

[(0.035731202232293216, 53), (0.03417090697145627, 14), (0.033630087192132056, 40), (0.03000597948316219, 1), (0.029720144201256442, 27)]

least 5:

[(0.003922466019515439, 89), (0.0038082042917730275, 37), (0.003695351749455765, 81), (0.00366986065998894, 59), (0.0034096940769996285, 85)]

iteration: 17

top 5:

[(0.03573120223245335, 53), (0.034170906972573654, 14), (0.03363008718945184, 40), (0.030005979478969578, 1), (0.029720144201073436, 27)]

least 5:

[(0.003922466019926266, 89), (0.0038082042915600855, 37), (0.0036953517493127238, 81), (0.0036698606601730304, 59), (0.0034096940774832204, 85)]

iteration: 18

top 5:

[(0.03573120223282649, 53), (0.03417090697262033, 14), (0.03363008718980977, 40), (0.03000597947987351, 1), (0.029720144201494613, 27)]

least 5:

[(0.003922466019760619, 89), (0.003808204291630339, 37), (0.003695351749371787, 81), (0.003669860660126391, 59), (0.003409694077385655, 85)]

iteration: 19

top 5:

[(0.035731202232629204, 53), (0.03417090697260239, 14), (0.03363008718972274, 40), (0.030005979479791393, 1), (0.02972014420139004, 27)]

least 5:

[(0.003922466019811419, 89), (0.003808204291603154, 37), (0.003695351749357335, 81), (0.0036698606601291736, 59), (0.003409694077402686, 85)]

iteration: 20

top 5:

[(0.035731202232680254, 53), (0.03417090697257926, 14), (0.03363008718975404, 40), (0.030005979479792014, 1), (0.02972014420140391, 27)]

least 5:

[(0.003922466019800721, 89), (0.003808204291613617, 37), (0.003695351749361289, 81), (0.003669860660126947, 59), (0.0034096940774030467, 85)]

iteration: 21

top 5:

[(0.035731202232671094, 53), (0.03417090697259606, 14), (0.033630087189739914, 40), (0.030005979479785415, 1), (0.029720144201406406, 27)]

least 5:

[(0.003922466019802408, 89), (0.0038082042916110087, 37), (0.0036953517493608905, 81), (0.0036698606601274944, 59), (0.003409694077402915, 85)]

iteration: 22

top 5:

[(0.0357312022326717, 53), (0.03417090697259024, 14), (0.03363008718974508, 40), (0.030005979479790237, 1), (0.029720144201405212, 27)]

least 5:

[(0.003922466019802171, 89), (0.0038082042916114615, 37), (0.0036953517493609972, 81), (0.003669860660127213, 59), (0.0034096940774027305, 85)]

iteration: 23

top 5:

[(0.03573120223267156, 53), (0.034170906972591585, 14), (0.03363008718974364, 40), (0.030005979479788183, 1), (0.029720144201405337, 27)]

least 5:

[(0.00392246601980231, 89), (0.003808204291611458, 37), (0.0036953517493609773, 81), (0.00366986066012729, 59), (0.003409694077402849, 85)]

iteration: 24

top 5:

[(0.03573120223267162, 53), (0.03417090697259134, 14), (0.03363008718974394, 40), (0.030005979479788707, 1), (0.02972014420140541, 27)]

least 5:

[(0.003922466019802252, 89), (0.00380820429161145, 37), (0.0036953517493609977, 81), (0.003669860660127286, 59), (0.0034096940774028155, 85)]

iteration: 25

top 5:

[(0.03573120223267159, 53), (0.03417090697259138, 14), (0.03363008718974388, 40), (0.030005979479788607, 1), (0.029720144201405382, 27)]

least 5:

[(0.003922466019802272, 89), (0.0038082042916114493, 37), (0.00369535174936099, 81), (0.0036698606601272836, 59), (0.0034096940774028216, 85)]

iteration: 26

top 5:

[(0.0357312022326716, 53), (0.034170906972591376, 14), (0.033630087189743904, 40), (0.030005979479788617, 1), (0.029720144201405382, 27)]

least 5:

[(0.003922466019802267, 89), (0.003808204291611452, 37), (0.0036953517493609916, 81), (0.003669860660127285, 59), (0.003409694077402821, 85)]

iteration: 27

top 5:

[(0.0357312022326716, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.03000597947978861, 1), (0.029720144201405382, 27)]

least 5:

[(0.003922466019802269, 89), (0.003808204291611451, 37), (0.0036953517493609916, 81), (0.0036698606601272845, 59), (0.0034096940774028216, 85)]

iteration: 28

top 5:

[(0.035731202232671594, 53), (0.034170906972591376, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114515, 37), (0.0036953517493609916, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 29

top 5:

[(0.035731202232671594, 53), (0.034170906972591376, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114515, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 30

top 5:

[(0.035731202232671594, 53), (0.034170906972591376, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114515, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 31

top 5:

[(0.035731202232671594, 53), (0.034170906972591376, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114515, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 32

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114515, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 33

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 34

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 35

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 36

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 37

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 38

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

iteration: 39

top 5:

[(0.035731202232671594, 53), (0.03417090697259137, 14), (0.03363008718974389, 40), (0.030005979479788607, 1), (0.02972014420140538, 27)]

least 5:

[(0.003922466019802269, 89), (0.0038082042916114506, 37), (0.003695351749360991, 81), (0.0036698606601272845, 59), (0.003409694077402821, 85)]

**For Large text file::**

iteration: 0

top 5:

[(0.0018759018759018757, 263), (0.0018663492063492068, 502), (0.001843125763125763, 126), (0.0018190764790764794, 285), (0.0018094549894549898, 146)]

least 5:

[(0.00042153846153846153, 408), (0.00037272727272727273, 62), (0.00037272727272727273, 424), (0.0003714285714285714, 93), (0.00032987012987012985, 558)]

iteration: 1

top 5:

[(0.00208871522584906, 263), (0.0019612553136778245, 965), (0.0018784860606765369, 537), (0.0018250404103778127, 243), (0.001812024186747996, 285)]

least 5:

[(0.0003929167721167721, 408), (0.0003743160173160173, 62), (0.0003505007114098023, 424), (0.00034146361574932996, 93), (0.00032792884460416927, 558)]

iteration: 2

top 5:

[(0.002023806689320866, 263), (0.001930221482836505, 537), (0.0019265979884266352, 965), (0.0018556711996323286, 243), (0.001841159061219935, 285)]

least 5:

[(0.0003877876917121473, 742), (0.0003602146579730995, 62), (0.00035365599001287314, 424), (0.00035036546727648763, 93), (0.0003282667952616297, 558)]

iteration: 3

top 5:

[(0.0020124609096470645, 263), (0.001942342285906805, 537), (0.0019272412154498738, 965), (0.001851426809420244, 243), (0.0018288144290373816, 285)]

least 5:

[(0.0003873714678497322, 408), (0.0003543498735762774, 424), (0.0003533621835896373, 93), (0.0003533337909382194, 62), (0.0003290909228619613, 558)]

iteration: 4

top 5:

[(0.0020213013194962386, 263), (0.0019452806944060203, 537), (0.0019258364033716434, 965), (0.001853046208733226, 243), (0.0018276326654513187, 285)]

least 5:

[(0.00038744703897895105, 408), (0.0003549739777031697, 424), (0.0003529650651495678, 62), (0.0003515765552584601, 93), (0.00032866894067525596, 558)]

iteration: 5

top 5:

[(0.002020648241069512, 263), (0.0019432292662412314, 537), (0.001925038850797009, 965), (0.0018527946111016682, 243), (0.0018273513860454682, 285)]

least 5:

[(0.00038788175337971264, 408), (0.00035476760995050013, 424), (0.00035313541201712655, 62), (0.00035139328886295155, 93), (0.00032864622380962837, 558)]

iteration: 6

top 5:

[(0.002020369601235596, 263), (0.001943325053511657, 537), (0.001925367516613498, 965), (0.001852508581885485, 243), (0.00182736086946202, 285)]

least 5:

[(0.00038783420947034134, 408), (0.000354757887916795, 424), (0.00035315542093914017, 62), (0.00035136216621915446, 93), (0.00032861102623779175, 558)]

iteration: 7

top 5:

[(0.0020203542983988376, 263), (0.0019433255693720871, 537), (0.0019254756150513515, 965), (0.00185260355909846, 243), (0.0018273831434829594, 285)]

least 5:

[(0.0003878012407954755, 408), (0.00035481668432744095, 424), (0.00035315389185485395, 62), (0.00035136359083937866, 93), (0.000328608331180942, 558)]

iteration: 8

top 5:

[(0.0020202960528814527, 263), (0.0019433530029001223, 537), (0.0019254540317402158, 965), (0.0018526156128594374, 243), (0.0018273898544955134, 285)]

least 5:

[(0.00038779670329234085, 408), (0.0003548168193811264, 424), (0.0003531500468419571, 62), (0.0003513574053835857, 93), (0.0003286019447437721, 558)]

iteration: 9

top 5:

[(0.0020202932110331543, 263), (0.001943340528777439, 537), (0.0019254505625726924, 965), (0.0018526346907954832, 243), (0.001827376100881599, 285)]

least 5:

[(0.0003877984430805082, 408), (0.00035481605111304054, 424), (0.00035314829788007246, 62), (0.0003513569318852105, 93), (0.0003286023969699676, 558)]

iteration: 10

top 5:

[(0.002020294439677219, 263), (0.0019433399291228567, 537), (0.0019254480408520608, 965), (0.001852634569392671, 243), (0.001827371821350296, 285)]

least 5:

[(0.00038779864430396745, 408), (0.00035481525002241897, 424), (0.0003531481448340745, 62), (0.00035135684237922165, 93), (0.00032860189294169653, 558)]

iteration: 11

top 5:

[(0.0020202914550268487, 263), (0.0019433412256099028, 537), (0.0019254480240708085, 965), (0.0018526342373305596, 243), (0.0018273722326772686, 285)]

least 5:

[(0.0003877985341071401, 408), (0.00035481535125811686, 424), (0.00035314808094787797, 62), (0.00035135682438581335, 93), (0.0003286019023452494, 558)]

iteration: 12

top 5:

[(0.0020202911047036095, 263), (0.001943341663265252, 537), (0.0019254478129213507, 965), (0.0018526340625993865, 243), (0.00182737216593084, 285)]

least 5:

[(0.00038779848933282737, 408), (0.00035481538933431123, 424), (0.0003531481021720569, 62), (0.0003513568931901821, 93), (0.00032860187080141083, 558)]

iteration: 13

top 5:

[(0.0020202911733395983, 263), (0.001943341577437378, 537), (0.0019254478363716495, 965), (0.0018526340184814765, 243), (0.001827372167361291, 285)]

least 5:

[(0.0003877984813816856, 408), (0.0003548153879304512, 424), (0.00035314810627196027, 62), (0.0003513568918989728, 93), (0.0003286018518202037, 558)]

iteration: 14

top 5:

[(0.0020202911900430746, 263), (0.0019433415689862833, 537), (0.0019254478029666197, 965), (0.0018526340214989263, 243), (0.0018273721729218184, 285)]

least 5:

[(0.00038779848643543497, 408), (0.0003548153846090981, 424), (0.00035314810534559505, 62), (0.00035135689203310715, 93), (0.00032860185261145413, 558)]

iteration: 15

top 5:

[(0.0020202911801852756, 263), (0.001943341570951596, 537), (0.001925447806809655, 965), (0.0018526340143738833, 243), (0.0018273721730432734, 285)]

least 5:

[(0.0003877984866083045, 408), (0.0003548153861189511, 424), (0.00035314810561834877, 62), (0.0003513568945317984, 93), (0.00032860185312545335, 558)]

iteration: 16

top 5:

[(0.002020291180484972, 263), (0.0019433415716701716, 537), (0.0019254478072224372, 965), (0.0018526340160612042, 243), (0.0018273721695520708, 285)]

least 5:

[(0.000387798487051352, 408), (0.000354815386408053, 424), (0.0003531481051865399, 62), (0.00035135689379425886, 93), (0.0003286018527569892, 558)]

iteration: 17

top 5:

[(0.002020291181244933, 263), (0.0019433415713309805, 537), (0.001925447807161981, 965), (0.0018526340162228554, 243), (0.0018273721699185125, 285)]

least 5:

[(0.00038779848714309693, 408), (0.0003548153864745611, 424), (0.00035314810509138927, 62), (0.0003513568937645588, 93), (0.0003286018525504435, 558)]

iteration: 18

top 5:

[(0.0020202911814371062, 263), (0.0019433415713812551, 537), (0.0019254478071751588, 965), (0.0018526340162229892, 243), (0.0018273721700467213, 285)]

least 5:

[(0.00038779848717513526, 408), (0.0003548153864730986, 424), (0.0003531481051139814, 62), (0.00035135689376359334, 93), (0.0003286018525132839, 558)]

iteration: 19

top 5:

[(0.002020291181497821, 263), (0.0019433415714466544, 537), (0.0019254478071563082, 965), (0.001852634016251283, 243), (0.0018273721700734899, 285)]

least 5:

[(0.00038779848719566317, 408), (0.00035481538648907617, 424), (0.0003531481051093664, 62), (0.0003513568937498808, 93), (0.00032860185252316603, 558)]

iteration: 20

top 5:

[(0.0020202911815162096, 263), (0.0019433415714550297, 537), (0.001925447807172359, 965), (0.0018526340162407949, 243), (0.0018273721700628335, 285)]

least 5:

[(0.0003877984871909734, 408), (0.00035481538649196297, 424), (0.0003531481051062342, 62), (0.00035135689375033447, 93), (0.0003286018525218833, 558)]

iteration: 21

top 5:

[(0.002020291181517849, 263), (0.0019433415714535868, 537), (0.0019254478071681809, 965), (0.001852634016243628, 243), (0.001827372170063878, 285)]

least 5:

[(0.0003877984871926566, 408), (0.00035481538649262325, 424), (0.0003531481051057267, 62), (0.00035135689375105704, 93), (0.0003286018525217163, 558)]

iteration: 22

top 5:

[(0.0020202911815189, 263), (0.0019433415714532048, 537), (0.0019254478071663158, 965), (0.0018526340162419099, 243), (0.0018273721700644606, 285)]

least 5:

[(0.00038779848719294226, 408), (0.00035481538649295447, 424), (0.0003531481051059607, 62), (0.0003513568937516589, 93), (0.0003286018525215181, 558)]

iteration: 23

top 5:

[(0.0020202911815185155, 263), (0.0019433415714531885, 537), (0.0019254478071663505, 965), (0.001852634016241483, 243), (0.0018273721700646861, 285)]

least 5:

[(0.00038779848719291314, 408), (0.0003548153864930318, 424), (0.0003531481051059712, 62), (0.0003513568937516619, 93), (0.0003286018525215335, 558)]

iteration: 24

top 5:

[(0.0020202911815182475, 263), (0.0019433415714531588, 537), (0.001925447807166304, 965), (0.0018526340162416859, 243), (0.0018273721700645393, 285)]

least 5:

[(0.00038779848719291943, 408), (0.0003548153864930152, 424), (0.00035314810510596675, 62), (0.00035135689375166354, 93), (0.0003286018525215436, 558)]

iteration: 25

top 5:

[(0.002020291181518222, 263), (0.0019433415714531525, 537), (0.0019254478071662731, 965), (0.0018526340162417364, 243), (0.0018273721700645127, 285)]

least 5:

[(0.00038779848719292117, 408), (0.00035481538649301475, 424), (0.00035314810510596025, 62), (0.00035135689375165904, 93), (0.0003286018525215321, 558)]

iteration: 26

top 5:

[(0.0020202911815182163, 263), (0.0019433415714531469, 537), (0.0019254478071662638, 965), (0.0018526340162417334, 243), (0.0018273721700645122, 285)]

least 5:

[(0.0003877984871929175, 408), (0.0003548153864930153, 424), (0.0003531481051059621, 62), (0.0003513568937516578, 93), (0.00032860185252152937, 558)]

iteration: 27

top 5:

[(0.002020291181518219, 263), (0.0019433415714531508, 537), (0.0019254478071662627, 965), (0.0018526340162417312, 243), (0.0018273721700645144, 285)]

least 5:

[(0.0003877984871929174, 408), (0.0003548153864930143, 424), (0.00035314810510596285, 62), (0.0003513568937516577, 93), (0.0003286018525215298, 558)]

iteration: 28

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531501, 537), (0.0019254478071662634, 965), (0.001852634016241731, 243), (0.001827372170064514, 285)]

least 5:

[(0.0003877984871929171, 408), (0.00035481538649301454, 424), (0.00035314810510596285, 62), (0.0003513568937516578, 93), (0.0003286018525215298, 558)]

iteration: 29

top 5:

[(0.002020291181518218, 263), (0.0019433415714531503, 537), (0.0019254478071662634, 965), (0.0018526340162417312, 243), (0.0018273721700645138, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 30

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531501, 537), (0.0019254478071662631, 965), (0.0018526340162417312, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.00035481538649301443, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 31

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531501, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 32

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.00035481538649301443, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 33

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 34

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 35

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 36

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 37

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 38

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]

iteration: 39

top 5:

[(0.0020202911815182184, 263), (0.0019433415714531497, 537), (0.0019254478071662631, 965), (0.001852634016241731, 243), (0.0018273721700645144, 285)]

least 5:

[(0.00038779848719291705, 408), (0.0003548153864930145, 424), (0.00035314810510596274, 62), (0.0003513568937516577, 93), (0.0003286018525215297, 558)]