|  |  |  |  |
| --- | --- | --- | --- |
| as pl1 5 games | 55.56908 | Games won in % | 80 |
| as pl1 10 games | 52.51422 | Games won in % | 60 |
| as pl1 50 games | 57.14893 | Games won in % | 72 |
| as pl1 100 games | 54.82274 | Games won in % | 72 |
| As pl1 150 games | 54.74178 | Games won in % | 73.33333 |
| as pl1 200 games | 54.05673 | Games won in % | 73.5 |
| as pl1 250 games | 53.40217 | Games won in % | 73.6 |
| as pl1 300 games | 52.96436 | Games won in % | 73.33333 |
| as pl1 350 games | 52.68765 | Games won in % | 73.14286 |
| as pl1 400 games | 52.36146 | Games won in % | 73.25 |
| as pl1 450 games | 52.01348 | Games won in % | 73.55556 |
| as pl1 500 games | 51.64705 | Games won in % | 72.6 |
|  |  |  |  |
| as pl2 5 games | 50.94535 | Games won in % | 60 |
| as pl2 10 games | 55.85345 | Games won in % | 60 |
| as pl2 50 games | 54.88114 | Games won in % | 52 |
| as pl2 100 games | 55.45816 | Games won in % | 45 |
| as pl2 150 games | 56.53413 | Games won in % | 53.33333 |
| as pl2 200 games | 56.52538 | Games won in % | 53.5 |
| as pl2 250 games | 56.05179 | Games won in % | 52 |
| as pl2 300 games | 55.50861 | games won in % | 51 |
| as pl2 350 games | 55.22355 | Games won in % | 52.57143 |
| as pl2 400 games | 54.88843 | Games won in % | 50.5 |
| as pl2 450 games | 54.35768 | Games won in % | 48.44444 |
| as pl2 500 games | 54.4149 | Games won in % | 49.2 |

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| --- | --- | --- | --- |
| as pl1 5 games | 60.58613 | Games won in % | 40 |
| as pl1 10 games | 59.36273 | Games won in % | 40 |
| as pl1 50 games | 62.29485 | Games won in % | 66 |
| as pl1 100 games | 62.12883 | Games won in % | 64 |
| As pl1 150 games | 61.68201 | Games won in % | 67.33333 |
| as pl1 200 games | 61.7261 | Games won in % | 65.5 |
| as pl1 250 games | 61.86091 | Games won in % | 67.2 |
| as pl1 300 games | 61.83444 | Games won in % | 67.33333 |
| as pl1 350 games | 61.31272 | Games won in % | 67.71429 |
| as pl1 400 games | 61.19063 | Games won in % | 67.5 |
| as pl1 450 games | 61.30876 | Games won in % | 67.77778 |
| as pl1 500 games | 61.12961 | Games won in % | 67.8 |
|  |  |  |  |
| as pl2 5 games | 55.45879 | Games won in % | 80 |
| as pl2 10 games | 60.57403 | Games won in % | 60 |
| as pl2 50 games | 59.25625 | Games won in % | 58 |
| as pl2 100 games | 58.80775 | Games won in % | 50 |
| as pl2 150 games | 58.74806 | Games won in % | 52 |
| as pl2 200 games | 58.36722 | Games won in % | 52.5 |
| as pl2 250 games | 58.21336 | Games won in % | 50.8 |
| as pl2 300 games | 57.82651 | games won in % | 51.66667 |
| as pl2 350 games | 57.31346 | Games won in % | 51.71429 |
| as pl2 400 games | 57.44113 | Games won in % | 50.75 |
| as pl2 450 games | 57.36423 | Games won in % | 49.55556 |
| as pl2 500 games | 57.13254 | Games won in % | 47.8 |

with oracle and alphabeta coeff:

SCORE= 0.2

LINE = -0.2

DIFF = 0.1

ADVLINE = -0.1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| as pl1 5 games | 59.69657 | Games won in % | 60 | [0.6993526962026995, 0.14651267428317255, 0.9950670643480584, -0.05069835379445506] |
| as pl1 10 games | 62.76811 | Games won in % | 60 | [1.0921613515929844, -0.35043423107736316, 0.49910245238091816, 0.14617454530040191] |
| as pl1 50 games | 59.56057 | Games won in % | 44 | [0.9026453605198118, 0.37141119451620336, 0.037425445105161895, 0.04605102380026079] |
| as pl1 100 games | 60.2546 | Games won in % | 40 | [1.1590210530984857, -0.4389491544476438, 0.722822700115086, -0.2107537487368918] |
| As pl1 150 games | 59.93172 | Games won in % | 39.33333 | [0.43232417615143415, -0.5484567148167732, 0.510491454040095, -0.2296900511628951] |
| as pl1 200 games | 59.9672 | Games won in % | 42.5 | [1.0522544828786975, -0.38004223266411663, 0.7375464211459373, 0.030505640479520535] |
| as pl1 250 games | 59.55538 | Games won in % | 43.2 | [0.7174015296347451, 0.10878086240258497, 0.2709692184031686, -0.41383392888231924] |
| as pl1 300 games | 58.95636 | Games won in % | 44.33333 | [0.7213320327870515, -0.5617769089667026, 0.4981301772051858, -0.21691399734616307] |
| as pl1 350 games | 58.846 | Games won in % | 44.57143 | [0.4095816941389797, -0.39581190866613825, 0.00859002765225162, 0.05087435055671413] |
| as pl1 400 games | 58.38386 | Games won in % | 45.25 | [0.528295551486176, -0.19742985094447124, 0.35491044748096784, 0.04153266752946586] |
| as pl1 450 games | 58.10994 | Games won in % | 45.77778 | [0.9512101145857956, -0.5561358282036764, 0.5128147260924458, -0.017978984016773038] |
| as pl1 500 games | 57.99429 | Games won in % | 46 | [1.038173896536963, -0.3986551886041709, 0.31140734141558946, -0.07820838806371774] |
|  |  |  |  |  |
| as pl2 5 games | 64.62081 | Games won in % | 0 | [0.5011455129775246, -0.2994534879734708, 0.30134192305994645, 0.19706062523701348] |
| as pl2 10 games | 65.71733 | Games won in % | 30 | [1.0921613515929847, -0.7919607467663425, 0.695336459353798, 0.14617454530040191] |
| as pl2 50 games | 57.59925 | Games won in % | 52 | [0.676220899280145, 0.23555651777240316, 0.535559259832429, 0.09133591604819419] |
| as pl2 100 games | 58.51975 | Games won in % | 54 | [1.2409678828761268, -0.2750554948923614, 0.6408758703374448, -0.12880691895925056] |
| as pl2 150 games | 58.97584 | Games won in % | 58.66667 | [0.9513381125971498, -1.0303982272306522, -0.00852248240562048, -0.26676247519473195] |
| as pl2 200 games | 58.60959 | Games won in % | 55.5 | [0.5826547489400404, -0.7154706140488715, 0.46920371603813305, 0.030505640479520535] |
| as pl2 250 games | 58.04427 | Games won in % | 54 | [0.7477508261743441, 0.13913015894218383, 0.3013185149427675, -0.474532521961517] |
| as pl2 300 games | 57.73381 | games won in % | 55 | [0.8311712535048689, -0.45193768824888525, 0.27845173576955107, -0.2443738025256174] |
| as pl2 350 games | 57.71012 | Games won in % | 54.57143 | [0.6828812711030487, -0.4206573247537808, 0.23219877244103526, -0.24727064249499736] |
| as pl2 400 games | 57.50022 | Games won in % | 53.75 | [0.5507754888540475, -0.017590352001498014, 0.3773903848488395, 0.06401260489733752] |
| as pl2 450 games | 57.46645 | Games won in % | 51.77778 | [0.9918894561819122, -0.6374945113959094, 0.26873867651574646, 0.1040590407715767] |
| as pl2 500 games | 57.17719 | Games won in % | 51 | [0.7069167571036618, -0.4722678862560157, 0.4218263878933563, 0.013807484001088114] |

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| for alphabeta:  SCORE= 5  LINE = 1  DIFF = 3  ADVLINE = 4 | for oracle:  SCORE= 0.2  LINE = -0.2  DIFF = 0.1  ADVLINE = -0.1 |

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| --- | --- | --- | --- | --- |
| as pl1 5 games | 55.63469 | Games won in % | 60 | [1.196512770989467, -0.2021890718248679, 0.39970180073901806, 0.19840120394011018] |
| as pl1 10 games | 61.60437 | Games won in % | 80 | [1.0975567477438275, -0.006500028982603434, 0.30291795019396334, -0.2462267183091332] |
| as pl1 50 games | 62.18491 | Games won in % | 72 | [1.1777221787814396, -0.9417631049662006, 0.6733695514245727, -0.09177637120252857] |
| as pl1 100 games | 62.23044 | Games won in % | 73 | [1.15403997643927, -0.6461904733995267, 0.5664661276933297, 0.10200131898194738] |
| As pl1 150 games | 62.06572 | Games won in % | 74 | [0.9813174997289769, -0.43651223132602857, 0.6303335553494408, -0.18017966373660904] |
| as pl1 200 games | 61.72168 | Games won in % | 73.5 | [0.7063844297148771, -0.36474485064739026, 0.4750883296500969, 0.03600578629463971] |
| as pl1 250 games | 61.84409 | Games won in % | 73.2 | [0.9304007291812859, -0.04160312115447758, 0.6840772514733493, -0.22330756789127643] |
| as pl1 300 games | 61.4731 | Games won in % | 72 | [1.0337629621505309, -0.23515959884197002, -0.05791780961913058, 0.06528942956133299] |
| as pl1 350 games | 61.07702 | Games won in % | 70 | [0.6429802951743924, -0.4518177647539948, 0.10418700463190056, -0.022519099529392603] |
| as pl1 400 games | 60.89685 | Games won in % | 70.25 | [0.7907545935753918, -0.4720796604118688, 0.5356880107329375, -0.16700982812145743] |
| as pl1 450 games | 60.8471 | Games won in % | 69.77778 | [0.7229447863011002, -0.40529983030183175, 0.1709219014252943, -0.19299411525175053] |
| as pl1 500 games | 60.85401 | Games won in % | 68.4 | [0.6755034743924765, -0.38790467296317316, 0.4045223569255789, -0.12612551243038195] |
|  |  |  |  |  |
| as pl2 5 games | 60.45858 | Games won in % | 60 | [1.1965127709894672, -0.350844459243749, 0.4988053923516056, 0.29750479555269765] |
| as pl2 10 games | 61.35557 | Games won in % | 70 | [0.9994397442573876, -0.2517925376987032, 0.2048009467075234, 0.24435829912306636] |
| as pl2 50 games | 58.64818 | Games won in % | 56 | [1.0871523942855728, -1.0323328894620674, 0.6733695514245726, 0.08936319778920498] |
| as pl2 100 games | 59.89349 | Games won in % | 55 | [0.9081994871063461, -0.6461904733995267, 0.4845192979156885, 0.2658949785372298] |
| as pl2 150 games | 59.50801 | Games won in % | 51.33333 | [1.203752043919998, -0.36236738326235496, 0.6303335553494409, -0.06896239164109855] |
| as pl2 200 games | 58.64927 | Games won in % | 52.5 | [0.7734701059918281, -0.5660018794782434, 0.542174005927048, 0.002462948156164227] |
| as pl2 250 games | 58.43239 | Games won in % | 53.2 | [0.9304007291812859, -0.16287891012671474, 0.19897409558440077, -0.07171283167598] |
| as pl2 300 games | 58.57242 | games won in % | 54 | [0.9788433517916222, -0.4273782350981504, 0.6011175146877736, 0.037829624381878646] |
| as pl2 350 games | 58.43136 | Games won in % | 52.85714 | [0.5435986308238218, -0.27789985214049645, 0.40233199768361216, -0.24612784431817625] |
| as pl2 400 games | 58.33624 | Games won in % | 52 | [0.7907545935753918, -0.6519191593548419, 0.041129388639761094, -0.009650266546355854] |
| as pl2 450 games | 58.17989 | Games won in % | 51.33333 | [0.6822654447049836, -0.3646204887057152, 0.37431860940587713, -0.2540131276459254] |
| as pl2 500 games | 57.84216 | Games won in % | 51.4 | [0.7123098232183989, -0.7743713356353573, 0.36771600809965643, -0.27335090773407134] |