Shouji Rating System

Formulas

$A\mu$ 1500

$B\mu$ 1500

$A\sigma$ 225

$B\sigma$ 225

$A\varsigma$ 0

$B\varsigma$ 0

β 400

α 0.5

φ 0.5

$\rho = \beta((At + Bt)/2)$

$Af = \beta ** At$

$Bf = \beta ** Bt$

$At = (A\sigma/(A\sigma + \beta)) ** (1 - \alpha)$

$Bt = (B\sigma/(B\sigma + \beta)) ** (1 - \alpha)$

$Ap = arctan((A\mu - B\mu)/\rho)/\pi + 0.5$

$Bp = arctan((B\mu - A\mu)/\rho)/\pi + 0.5$

As, 1 = Win, 0.5 = Draw, 0 = Loss.

Bs, 1 = Win, 0.5 = Draw, 0 = Loss.

$A\mu' = A\mu + Af(As - Ap) + AfA\varsigma$

$B\mu' = B\mu + Bf(Bs - Bp) + BfB\varsigma$

$A\sigma' = \varphi A\sigma + A\sigma|A\varsigma|$

$B\sigma' = \varphi B\sigma + B\sigma|B\varsigma|$