

Examples of USAPA Rating Calculations - 100% Weighting

WF = 100%

Singles		WOR		LOR		PWW	PID		WNR		LNR
		Winning Player's Old Rating		Losing Player's Old Rating		Probability That The Winning Team Would Win	Point Increase or Decrease		Winning Player's New Rating		Losing Player's New Rating
	Formula					$1/[1 + 20^{3(LOR-WOR)}]$	$(1-PWW)0.1$		WOR + PID		LOR - PID
	Player	B		C					B		C
		4.120		3.970		0.794	0.021		4.141		3.949
	Various	3.970		4.120		0.206	0.079		4.049		4.041
	Player	4.710		4.280		0.979	0.002		4.712		4.278
	Ratings	4.280		4.710		0.021	0.098		4.378		4.612
		4.130		4.130		0.500	0.050		4.180		4.080

Doubles		WOR	WOR	WTOR		LOR	LOR	LTOR		PWW	PID		WNR	WNR		LNR	LNR
		Winning Player's Old Rating	Winning Player's Old Rating	Winning Team's Old Rating		Losing Player's Old Rating	Losing Player's Old Rating	Losing Team's Old Rating		Probability That The Winning Team Would Win	Point Increase or Decrease		Winning Player's New Rating	Winning Player's New Rating		Losing Player's New Rating	Losing Player's New Rating
	Formula			(A+B)/2				(C+D)/2		$1/[1 + 20^{3(LTOR-WTOR)}]$	$(1-PWW)0.1$		WOR + PID	WOR + PID		LOR - PID	LOR - PID
	Player	A	B			C	D						A	B		C	D
		4.190	4.070	4.1300		4.150	3.910	4.030		0.711	0.029		4.219	4.099		4.121	3.881
	Various	4.150	3.910	4.0300		4.190	4.070	4.130		0.289	0.071		4.221	3.981		4.119	3.999
	Player	4.830	4.710	4.7700		4.280	4.170	4.225		0.993	0.001		4.831	4.711		4.279	4.169
	Ratings	4.280	4.170	4.2250		4.830	4.710	4.770		0.007	0.099		4.379	4.269		4.731	4.611
		4.140	4.020	4.0800		4.110	4.050	4.080		0.500	0.050		4.190	4.070		4.060	4.000

Mixed		WOR	WOR	WTOR		LOR	LOR	LTOR		PWW	PID		WNR	WNR		LNR	LNR
		Winning Player's Old Rating	Winning Player's Old Rating	Winning Team's Old Rating		Losing Player's Old Rating	Losing Player's Old Rating	Team's Old Rating		Probability That The Winning Team Would Win	Point Increase or Decrease		Winning Player's New Rating	Winning Player's New Rating		Losing Player's New Rating	Losing Player's New Rating
	Formula			(A+B)/2				(C+D)/2		$1/[1 + 20^{3(LTOR-WTOR)}]$	$(1-PWW)0.1$		WOR + PID	WOR + PID		LOR - PID	LOR - PID
	Player	A	B			C	D						A	B		C	D
		4.190	4.070	4.130		4.150	3.910	4.030		0.711	0.029		4.219	4.099		4.121	3.881
	Various	4.150	3.910	4.030		4.190	4.070	4.130		0.289	0.071		4.221	3.981		4.119	3.999
	Player	4.830	4.710	4.770		4.280	4.170	4.225		0.993	0.001		4.831	4.711		4.279	4.169
	Ratings	4.280	4.170	4.225		4.830	4.710	4.770		0.007	0.099		4.379	4.269		4.731	4.611
		4.140	4.020	4.080		4.110	4.050	4.080		0.500	0.050		4.190	4.070		4.060	4.000

Examples of USAPA Rating Calculations - 80% Weighting

WF = 80%

Singles		WOR	LOR	PWW	PID	WNR	LNR
		Winning Player's Old Rating	Losing Player's Old Rating	Probability That The Winning Team Would Win	Point Increase or Decrease	Winning Player's New Rating	Losing Player's New Rating
	Formula			$1/[1 + 20^{3(LOR-WOR)}]$	$(1-PWW) * 0.1 * .80$	WOR + PID	LOR - PID
	Player	B	C			B	C
		4.120	3.970	0.794	0.016	4.136	3.954
	Various	3.970	4.120	0.206	0.064	4.034	4.056
	Player	4.710	4.280	0.979	0.002	4.712	4.278
	Ratings	4.280	4.710	0.021	0.078	4.358	4.632
		4.130	4.130	0.500	0.040	4.170	4.090

Doubles		WOR	WOR	WTOR	LOR	LOR	LTOR	PWW	PID	WNR	WNR	LNR	LNR
		Winning Player's Old Rating	Winning Player's Old Rating	Winning Team's Old Rating	Losing Player's Old Rating	Losing Player's Old Rating	Losing Team's Old Rating	Probability That The Winning Team Would Win	Point Increase or Decrease	Winning Player's New Rating	Winning Player's New Rating	Losing Player's New Rating	Losing Player's New Rating
	Formula			(A+B)/2			(C+D)/2	$1/[1 + 20^{3(LTOR-WTOR)}]$	$(1-PWW)*0.1*.80$	WOR + PID	WOR + PID	LOR - PID	LOR - PID
	Player	A	B		C	D				A	B	C	D
		4.190	4.070	4.130	4.150	3.910	4.030	0.711	0.023	4.213	4.093	4.127	3.887
	Various	4.150	3.910	4.030	4.190	4.070	4.130	0.289	0.057	4.207	3.967	4.133	4.013
	Player	4.830	4.710	4.770	4.280	4.170	4.225	0.993	0.001	4.831	4.711	4.279	4.169
	Ratings	4.280	4.170	4.225	4.830	4.710	4.770	0.007	0.079	4.359	4.249	4.751	4.631
		4.140	4.020	4.080	4.110	4.050	4.080	0.500	0.040	4.180	4.060	4.070	4.010

Mixed		WOR	WOR	WTOR	LOR	LOR	LTOR	PWW	PID	WNR	WNR	LNR	LNR
		Winning Player's Old Rating	Winning Player's Old Rating	Winning Team's Old Rating	Losing Player's Old Rating	Losing Player's Old Rating	Losing Team's Old Rating	Probability That The Winning Team Would Win	Point Increase or Decrease	Winning Player's New Rating	Winning Player's New Rating	Losing Player's New Rating	Losing Player's New Rating
	Formula			(A+B)/2			(C+D)/2	$1/[1 + 20^{3(LTOR-WTOR)}]$	$(1-PWW)*0.1*.80$	WOR + PID	WOR + PID	LOR - PID	LOR - PID
	Player	A	B		C	D				A	B	C	D
		4.190	4.070	4.130	4.150	3.910	4.030	0.711	0.023	4.213	4.093	4.127	3.887
	Various	4.150	3.910	4.030	4.190	4.070	4.130	0.289	0.057	4.207	3.967	4.133	4.013
	Player	4.830	4.710	4.770	4.280	4.170	4.225	0.993	0.001	4.831	4.711	4.279	4.169
	Ratings	4.280	4.170	4.225	4.830	4.710	4.770	0.007	0.079	4.359	4.249	4.751	4.631
		4.140	4.020	4.080	4.110	4.050	4.080	0.500	0.040	4.180	4.060	4.070	4.010

Examples of USAPA Rating Calculations - 60% Weighting

WF = 60%

Singles		WOR	LOR	PWW	PID	WNR	LNR
		Winning Player's Old Rating	Losing Player's Old Rating	Probability That The Winning Team Would Win	Point Increase or Decrease	Winning Player's New Rating	Losing Player's New Rating
	Formula			$1/[1 + 20^{3(LOR-WOR)}]$	$(1-PWW)0.1*.60$	WOR + PID	LOR – PID
	Player	B	C			B	C
		4.120	3.970	0.794	0.012	4.132	3.958
	Various	3.970	4.120	0.206	0.048	4.018	4.072
	Player	4.710	4.280	0.979	0.001	4.711	4.279
	Ratings	4.280	4.710	0.021	0.059	4.339	4.651
		4.130	4.130	0.500	0.030	4.160	4.100

Doubles		WOR	WOR	WTOR	LOR	LOR	LTOR	PWW	PID	WNR	WNR	LNR	LNR
		Winning Player's Old Rating	Winning Player's Old Rating	Winning Team's Old Rating	Losing Player's Old Rating	Losing Player's Old Rating	Losing Team's Old Rating	Probability That The Winning Team Would Win	Point Increase or Decrease	Winning Player's New Rating	Winning Player's New Rating	Losing Player's New Rating	Losing Player's New Rating
	Formula			(A+B)/2			(C+D)/2	$1/[1 + 20^{3(LTOR-WTOR)}]$	$(1-PWW)0.1*.60$	WOR + PID	WOR + PID	LOR – PID	LOR – PID
	Player	A	B		C	D				A	B	C	D
		4.190	4.070	4.130	4.150	3.910	4.030	0.711	0.017	4.207	4.087	4.133	3.893
	Various	4.150	3.910	4.030	4.190	4.070	4.130	0.289	0.043	4.193	3.953	4.147	4.027
	Player	4.830	4.710	4.770	4.280	4.170	4.225	0.993	0.000	4.830	4.710	4.280	4.170
	Ratings	4.280	4.170	4.225	4.830	4.710	4.770	0.007	0.060	4.340	4.230	4.770	4.650
		4.140	4.020	4.080	4.110	4.050	4.080	0.500	0.030	4.170	4.050	4.080	4.020

Mixed		WOR	WOR	WTOR	LOR	LOR	LTOR	PWW	PID	WNR	WNR	LNR	LNR
		Winning Player's Old Rating	Winning Player's Old Rating	Winning Team's Old Rating	Losing Player's Old Rating	Losing Player's Old Rating	Losing Team's Old Rating	Probability That The Winning Team Would Win	Point Increase or Decrease	Winning Player's New Rating	Winning Player's New Rating	Losing Player's New Rating	Losing Player's New Rating
	Formula			(A+B)/2			(C+D)/2	$1/[1 + 20^{3(LTOR-WTOR)}]$	$(1-PWW)0.1*.60$	WOR + PID	WOR + PID	LOR – PID	LOR – PID
	Player	A	B		C	D				A	B	C	D
		4.190	4.070	4.130	4.150	3.910	4.030	0.711	0.017	4.207	4.087	4.133	3.893
	Various	4.150	3.910	4.030	4.190	4.070	4.130	0.289	0.043	4.193	3.953	4.147	4.027
	Player	4.830	4.710	4.770	4.280	4.170	4.225	0.993	0.000	4.830	4.710	4.280	4.170
	Ratings	4.280	4.170	4.225	4.830	4.710	4.770	0.007	0.060	4.340	4.230	4.770	4.650
		4.140	4.020	4.080	4.110	4.050	4.080	0.500	0.030	4.170	4.050	4.080	4.020

FORMULA KEY

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WOR = Winning Player's Old Rating

LOR = Losing Player's Old Rating

TOR = Team's Old Rating = (Teammate A + Teammate B)/2

PWW = Probability that the Winning Team would Win = $1/[1 + 20^{3(LOR-WOR)}]$

PID = Points Increase or Decrease = $(1-PWW) * 0.1 * WF$

WNR = Winning Player's New Rating = WOR + PID

LNR = Losing Player's New Rating = LOR - PID

WF = Weight Factor

Where:

WF = 100% for USAPA sanctioned tournaments (all matches refereed)

**WF = 80% for USAPA medal match only (MMO) sanctioned tournaments
(medal matches and all round-robin matches refereed)**

WF = 60% for non-sanctioned tournaments (matches may or may not have referees)