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 Conversion Factors For Production Traits. Source: INTERBULL 1912
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = PCORR2*Foreign Reliability

breed	country2	amilk	bmilk	afat	bfat	aprot	bprot	pcorr2
BSW	AUS	-34.74	1.1874	0.098	1.2882	-1.230	1.3980	0.4900
BSW	CHE	-167.40	1.0290	-6.200	1.0290	-4.000	1.0390	0.7225
BSW	DEA	319.90	1.2800	16.400	1.4040	15.500	1.4170	0.7225
BSW	FRA	62.50	0.9430	4.100	0.9050	4.700	0.9750	0.7056
BSW	GBR	-284.36	2.1352	-8.057	2.5801	-7.902	2.6637	0.7056
BSW	ITA	-54.30	0.9510	1.600	1.0660	2.900	0.9220	0.7225
BSW	NLD	989.47	0.8604	32.441	0.9085	31.043	0.9085	0.7396
BSW	NZL	314.59	1.3143	35.012	1.1888	17.692	1.4568	0.4900
BSW	SVN	-7235.60	62.8710	-284.600	2.4800	-255.500	2.2260	0.6724
BSW	USA	-114.20	0.9710	-5.000	1.0700	-6.200	1.1630	0.7921

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 Conversion Factors For SCS Traits. Source: INTERBULL 1912
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = SCORR2*Foreign Reliability

breed	country2	a	b	scorr2
BSW	CHE	46.100	0.5400	0.8281
BSW	DEA	53.600	0.4710	0.8464
BSW	FRA	100.200	5.5660	0.8281
BSW	GBR	100.262	-0.4487	0.8100
BSW	ITA	66.800	0.3360	0.7921
BSW	NLD	-46.781	1.4429	0.7921
BSW	NZL	95.394	-14.8995	0.7569
BSW	SVN	41.700	0.5610	0.7921
BSW	USA	178.300	-26.3890	0.8100

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 Conversion Factors For Type. Source = INTERBULL MACE 1912
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = TCORR2*Foreign Reliability

country2=CHE

	c	c	f			
	a	o	o			
	n	u	r	a	b	t
b	t	n	t	v	v	c
r	r	t	r	a	a	o
e	a	r	a	l	l	r
e	i	y	i	u	u	r
d	t	2	t	e	e	2
BSW CONFORMATION		CHE FINAL SCORE		-80.686	0.7938	0.74
BSW DAIRY STRENGTH		CHE OVERALL FRAME		-50.884	0.4907	

BSW RUMP	CHE OVERALL RUMP	-29.806	0.3052
BSW FEET AND LEGS	CHE OVERALL FEET & LEG	-61.302	0.6122
BSW MAMMARY SYSTEM	CHE OVERALL UDDER SCORE	-58.851	0.5797
BSW STATURE	CHE STATURE	-55.412	0.5356
BSW THURL PLACEMENT	CHE THURL PLACEMENT	-56.573	0.5720
BSW CHEST WIDTH	CHE CHEST WIDTH	-77.327	0.7955
BSW BODY DEPTH	CHE BODY DEPTH	-54.826	0.5417
BSW LOIN STRENGTH	CHE TOP LINE	-51.089	0.5365
BSW PIN WIDTH	CHE RUMP WIDTH	-55.894	0.5801
BSW RUMP ANGLE	CHE RUMP ANGLE	-57.633	0.5854
BSW BONE QUALITY	CHE HOCK QUALITY	-58.558	0.5635
BSW FOOT ANGLE	CHE FOOT ANGLE	-41.170	0.4027
BSW HEEL DEPTH	CHE HEEL DEPTH	-59.846	0.6066
BSW REAR LEGS SIDE VIEW	CHE REAR LEG SET	-51.728	0.5221
BSW UDDER DEPTH	CHE UDDER DEPTH	-54.227	0.5415
BSW MEDIAN SUSPENSORY	CHE MEDIAN SUSPENSORY	-69.451	0.6713
BSW FORE ATTACHMENT	CHE FORE UDDER	-54.436	0.5361
BSW FRONT TEAT PLACEMENT	CHE FRONT TEAT PLACEMENT	-52.162	0.5206
BSW TEAT LENGTH	CHE TEAT LENGTH	-41.814	0.3935
BSW REAR ATTACHMENT HEIGHT	CHE REAR UDDER HEIGHT	-63.954	0.6240
BSW REAR ATTACHMENT WIDTH	CHE REAR UDDER WIDTH	-68.106	0.6684
BSW REAR TEAT PLACEMENT	CHE REAR TEAT PLACEMENT	-47.716	0.4757
BSW ANGULARITY	CHE ANGULARITY	57.929	-0.6351

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Conversion Factors For Type. Source = INTERBULL MACE 1912
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=DEA

	c	c	f			
	a	o	o		b	t
	n	u	r		v	c
b	t	n	t		a	a
r	r	t	r		l	r
e	a	r	a		u	u
e	i	y	i		e	e
d	t	2	t			2
BSW CONFORMATION	DEA CONFORMATION	-67.059	0.6202	0.69		
BSW DAIRY STRENGTH	DEA OVERALL FRAME	-61.642	0.5680			
BSW RUMP	DEA OVERALL RUMP	-41.682	0.4034			
BSW FEET AND LEGS	DEA OVERALL FEET & LEG	-42.886	0.4129			
BSW MAMMARY SYSTEM	DEA OVERALL UDDER SCORE	-63.334	0.5870			
BSW STATURE	DEA STATURE	-62.779	0.5858			
BSW THURL PLACEMENT	DEA THURL PLACEMENT	-41.503	0.4325			
BSW CHEST WIDTH	DEA CHEST WIDTH	-65.949	0.6504			
BSW BODY DEPTH	DEA BODY DEPTH	-50.563	0.4878			
BSW LOIN STRENGTH	DEA TOP LINE	-55.843	0.5518			
BSW PIN WIDTH	DEA RUMP WIDTH	-52.269	0.5202			
BSW RUMP ANGLE	DEA RUMP ANGLE	-53.760	0.5541			
BSW BONE QUALITY	DEA HOCK QUALITY	-49.694	0.4819			
BSW FOOT ANGLE	DEA FOOT ANGLE	-50.141	0.4820			
BSW HEEL DEPTH	DEA HEEL DEPTH	-52.939	0.5187			
BSW REAR LEGS SIDE VIEW	DEA REAR LEG SET	-55.988	0.5518			
BSW UDDER DEPTH	DEA UDDER DEPTH	-53.928	0.5165			
BSW MEDIAN SUSPENSORY	DEA MEDIAN SUSPENSORY	-74.680	0.7093			

BSW FORE ATTACHMENT	DEA FORE UDDER	-56.903	0.5518
BSW FRONT TEAT PLACEMENT	DEA FRONT TEAT PLACEMENT	-66.970	0.6434
BSW TEAT LENGTH	DEA TEAT LENGTH	-52.170	0.5172
BSW REAR ATTACHMENT HEIGHT	DEA REAR UDDER HEIGHT	-55.431	0.5098
BSW REAR ATTACHMENT WIDTH	DEA REAR UDDER WIDTH	-62.525	0.5817
BSW REAR TEAT PLACEMENT	DEA REAR TEAT PLACEMENT	-58.969	0.5602

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Conversion Factors For Type. Source = INTERBULL MACE 1912
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=FRA

	c	c	f			
	a	o	o		b	t
b	n	u	r	a	v	c
r	t	n	t	v	v	o
e	r	t	r	a	a	r
e	a	r	a	l	l	r
d	i	y	i	u	u	r
	t	2	t	e	e	2
BSW CONFORMATION	FRA OVERALL SCORE	-3.147	6.6163	0.64		
BSW DAIRY STRENGTH	FRA OVERALL FRAME	-3.302	6.9926			
BSW RUMP	FRA OVERALL RUMP	-0.515	5.9196			
BSW FEET AND LEGS	FRA OVERALL FEET & LEG	-1.109	3.7071			
BSW MAMMARY SYSTEM	FRA OVERALL UDDER SCORE	-2.751	7.6576			
BSW STATURE	FRA STATURE	-2.879	7.2393			
BSW THURL PLACEMENT	FRA THURL PLACEMENT	1.848	6.2208			
BSW CHEST WIDTH	FRA CHEST DEPTH	-0.696	7.9993			
BSW BODY DEPTH	FRA BODY DEPTH	-1.481	5.5664			
BSW LOIN STRENGTH	FRA TOP LINE	-0.799	5.1894			
BSW PIN WIDTH	FRA RUMP WIDTH	-0.200	7.3374			
BSW RUMP ANGLE	FRA RUMP ANGLE	2.243	7.0355			
BSW BONE QUALITY	FRA HOCK QUALITY	-2.142	5.8000			
BSW FOOT ANGLE	FRA HEEL DEPTH	-0.333	5.5352			
BSW HEEL DEPTH	FRA HEEL DEPTH	0.052	6.1119			
BSW REAR LEGS SIDE VIEW	FRA REAR LEG SET	-1.312	6.5003			
BSW UDDER DEPTH	FRA UDDER DEPTH	-1.435	6.3883			
BSW MEDIAN SUSPENSORY	FRA MEDIAN SUSPENSORY	-0.445	8.2035			
BSW FORE ATTACHMENT	FRA FORE UDDER	-1.847	7.1916			
BSW FRONT TEAT PLACEMENT	FRA FRONT TEAT PLACEMENT	-2.365	7.5033			
BSW TEAT LENGTH	FRA TEAT LENGTH	0.398	6.2742			
BSW REAR ATTACHMENT HEIGHT	FRA REAR UDDER HEIGHT	-2.519	7.0620			
BSW REAR ATTACHMENT WIDTH	FRA REAR UDDER WIDTH	-2.214	7.9793			
BSW REAR TEAT PLACEMENT	FRA REAR TEAT PLACEMENT	-0.744	7.1456			
BSW ANGULARITY	FRA ANGULARITY	-4.398	8.3677			

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Conversion Factors For Type. Source = INTERBULL MACE 1912
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=GBR

	c	c	f			
	a	o	o		b	t
b	n	u	r	a	v	v
r	t	n	t	v	a	c
e	r	t	r	a	a	o
e	a	r	a	l	l	r
d	i	y	i	u	u	r
	t	2	t	e	e	2
BSW FEET AND LEGS		GBR OVERALL FEET & LEG		-0.887	4.0825	
BSW MAMMARY SYSTEM		GBR OVERALL UDDER SCORE		-3.406	5.1587	
BSW STATURE		GBR STATURE		-3.901	9.0429	
BSW CHEST WIDTH		GBR CHEST WIDTH		-1.571	6.1269	
BSW BODY DEPTH		GBR BODY DEPTH		-0.336	4.3677	
BSW PIN WIDTH		GBR RUMP WIDTH		-0.895	5.8985	
BSW RUMP ANGLE		GBR RUMP ANGLE		0.741	3.7669	
BSW FOOT ANGLE		GBR FOOT ANGLE		0.283	7.5543	
BSW REAR LEGS SIDE VIEW		GBR REAR LEG SET		-2.488	6.1483	
BSW UDDER DEPTH		GBR UDDER DEPTH		-1.633	3.3726	
BSW MEDIAN SUSPENSORY		GBR MEDIAN SUSPENSORY		-1.338	2.9418	
BSW FORE ATTACHMENT		GBR FORE UDDER		-3.091	4.8733	
BSW TEAT PLACEMENT		GBR FRONT TEAT PLACEMENT		-1.769	5.7032	
BSW TEAT LENGTH		GBR TEAT LENGTH		0.702	4.6360	
BSW REAR ATTACHMENT HEIGHT		GBR REAR UDDER HEIGHT		-1.656	4.7571	
BSW ANGULARITY		GBR ANGULARITY		-3.592	11.0369	

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Conversion Factors For Type. Source = INTERBULL MACE 1912
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=ITA

	c	c	f			
	a	o	o		b	t
b	n	u	r	a	v	v
r	t	n	t	v	a	c
e	r	t	r	a	a	o
e	a	r	a	l	l	r
d	i	y	i	u	u	r
	t	2	t	e	e	2
BSW CONFORMATION		ITA FINAL SCORE		-82.161	0.7438	0.69
BSW DAIRY STRENGTH		ITA OVERALL FRAME		-38.556	0.3451	
BSW RUMP		ITA OVERALL RUMP		-38.297	0.3595	
BSW FEET AND LEGS		ITA OVERALL FEET & LEG		-36.086	0.3167	
BSW MAMMARY SYSTEM		ITA OVERALL UDDER SCORE		-76.594	0.6882	
BSW STATURE		ITA STATURE		-49.496	0.4476	
BSW THURL PLACEMENT		ITA THURL PLACEMENT		-21.155	0.2224	
BSW CHEST WIDTH		ITA STRENGTH		-31.793	0.3070	
BSW BODY DEPTH		ITA BODY DEPTH		-28.874	0.2799	
BSW LOIN STRENGTH		ITA TOP LINE		-26.955	0.2635	
BSW PIN WIDTH		ITA RUMP WIDTH		-33.693	0.3203	
BSW RUMP ANGLE		ITA RUMP ANGLE		-26.876	0.2818	
BSW BONE QUALITY		ITA HOCK QUALITY		-33.249	0.2926	
BSW FOOT ANGLE		ITA FOOT ANGLE		-30.049	0.2656	
BSW HEEL DEPTH		ITA HEEL DEPTH		-33.441	0.3038	
BSW REAR LEGS SIDE VIEW		ITA REAR LEG SET		-28.157	0.2775	

BSW UDDER DEPTH	ITA UDDER DEPTH	-33.790	0.3010
BSW MEDIAN SUSPENSORY	ITA MEDIAN SUSPENSORY	-44.809	0.4097
BSW FORE ATTACHMENT	ITA FORE UDDER	-33.671	0.2999
BSW TEAT PLACEMENT	ITA FRONT TEAT PLACEMENT	-31.930	0.2801
BSW TEAT LENGTH	ITA TEAT LENGTH	-30.988	0.3137
BSW REAR ATTACHMENT HEIGHT	ITA REAR UDDER HEIGHT	-54.113	0.4758
BSW REAR ATTACHMENT WIDTH	ITA REAR UDDER WIDTH	-55.526	0.4963
BSW REAR TEAT PLACEMENT	ITA REAR TEAT PLACEMENT	-33.970	0.3086

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Conversion Factors For Type. Source = INTERBULL MACE 1912
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=NLD

	c	c	f			
	a	o	o		b	t
b	n	u	r	a	v	c
r	t	n	t	v	a	o
e	r	t	r	a	l	r
e	a	r	a	l	l	r
e	i	y	i	u	u	r
d	t	2	t	e	e	2

BSW CONFORMATION	NLD CONFORMATION	-171.880	1.6767	0.59
BSW FEET AND LEGS	NLD OVERALL FEET & LEG	-133.315	1.1862	
BSW MAMMARY SYSTEM	NLD OVERALL UDDER SCORE	-159.471	1.6743	
BSW STATURE	NLD STATURE	-143.872	1.4281	
BSW CHEST WIDTH	NLD CHEST WIDTH	-185.352	1.8348	
BSW BODY DEPTH	NLD BODY DEPTH	-127.093	1.3212	
BSW PIN WIDTH	NLD RUMP WIDTH	-155.122	1.7337	
BSW RUMP ANGLE	NLD RUMP ANGLE	-150.695	1.4885	
BSW FOOT ANGLE	NLD FOOT ANGLE	-136.806	1.1838	
BSW HEEL DEPTH	NLD HEEL DEPTH	-144.380	1.2555	
BSW REAR LEGS SIDE VIEW	NLD REAR LEG SET	-120.864	1.2705	
BSW UDDER DEPTH	NLD UDDER DEPTH	-150.814	1.5366	
BSW MEDIAN SUSPENSORY	NLD MEDIAN SUSPENSORY	-157.777	1.6581	
BSW FORE ATTACHMENT	NLD FORE UDDER	-134.045	1.3703	
BSW TEAT PLACEMENT	NLD FRONT TEAT PLACEMENT	-152.967	1.5012	
BSW TEAT LENGTH	NLD TEAT LENGTH	-121.087	1.1682	
BSW REAR ATTACHMENT HEIGHT	NLD REAR UDDER HEIGHT	-124.876	1.3621	
BSW REAR ATTACHMENT WIDTH	NLD REAR UDDER WIDTH	-120.349	1.3151	
BSW REAR TEAT PLACEMENT	NLD REAR TEAT PLACEMENT	-149.171	1.5320	
BSW ANGULARITY	NLD ANGULARITY	-157.996	1.6624	

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Conversion Factors For Type. Source = INTERBULL MACE 1912
Converted Canadian Proof = A + (B* Foreign Proof)
Converted Proof Reliability = TCORR2*Foreign Reliability

country2=SVN

	c	c	f			
	a	o	o		b	t
	n	u	r	a		

b	t	n	t	v	v	c
r	r	t	r	a	a	o
e	a	r	a	l	l	r
e	i	y	i	u	u	r
d	t	2	t	e	e	2

BSW CONFORMATION	SVN CONFORMATION	-43.258	0.2985	0.62
BSW DAIRY STRENGTH	SVN OVERALL FRAME	-36.675	0.2685	
BSW RUMP	SVN OVERALL RUMP	-26.542	0.2249	
BSW FEET AND LEGS	SVN OVERALL FEET & LEG	-29.212	0.2318	
BSW MAMMARY SYSTEM	SVN OVERALL UDDER SCORE	-45.988	0.3287	
BSW STATURE	SVN STATURE	-50.907	0.3920	
BSW THURL PLACEMENT	SVN THURL PLACEMENT	-16.500	0.1691	
BSW CHEST WIDTH	SVN CHEST WIDTH	-34.039	0.3444	
BSW BODY DEPTH	SVN BODY DEPTH	-23.685	0.2112	
BSW LOIN STRENGTH	SVN TOP LINE	-28.195	0.2751	
BSW PIN WIDTH	SVN RUMP WIDTH	-28.976	0.2487	
BSW RUMP ANGLE	SVN RUMP ANGLE	-28.054	0.3043	
BSW BONE QUALITY	SVN HOCK QUALITY	-34.935	0.2862	
BSW FOOT ANGLE	SVN FOOT ANGLE	-29.864	0.2551	
BSW HEEL DEPTH	SVN HEEL DEPTH	-25.533	0.2244	
BSW REAR LEGS SIDE VIEW	SVN REAR LEG SET	-26.514	0.2707	
BSW UDDER DEPTH	SVN UDDER DEPTH	-35.323	0.2907	
BSW MEDIAN SUSPENSORY	SVN MEDIAN SUSPENSORY	-37.927	0.3023	
BSW FORE ATTACHMENT	SVN FORE UDDER	-34.433	0.2602	
BSW TEAT PLACEMENT	SVN FRONT TEAT PLACEMENT	-47.794	0.3847	
BSW TEAT LENGTH	SVN TEAT LENGTH	-28.694	0.3225	
BSW REAR ATTACHMENT HEIGHT	SVN REAR UDDER HEIGHT	-45.970	0.3522	
BSW REAR ATTACHMENT WIDTH	SVN REAR UDDER WIDTH	-52.093	0.4081	
BSW REAR TEAT PLACEMENT	SVN REAR TEAT PLACEMENT	-45.870	0.3754	

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 Conversion Factors For Type. Source = INTERBULL MACE 1912
 Converted Canadian Proof = A + (B* Foreign Proof)
 Converted Proof Reliability = TCORR2*Foreign Reliability

country2=USA

	c	c	f			
	a	o	o			
	n	u	r	a	b	t
b	t	n	t	v	v	c
r	r	t	r	a	a	o
e	a	r	a	l	l	r
e	i	y	i	u	u	r
d	t	2	t	e	e	2

BSW CONFORMATION	USA PTA TYPE (FINAL SCORE)	-1.057	11.2720	0.74
BSW DAIRY STRENGTH	USA OVERALL FRAME	-1.062	3.9264	
BSW RUMP	USA OVERALL RUMP	-0.665	8.7606	
BSW FEET AND LEGS	USA OVERALL FEET & LEG	-0.100	6.0146	
BSW MAMMARY SYSTEM	USA OVERALL UDDER SCORE	-0.987	7.6929	
BSW STATURE	USA STATURE	-1.087	4.1495	
BSW THURL PLACEMENT	USA THURL PLACEMENT	-1.748	6.3629	
BSW CHEST WIDTH	USA STRENGTH	-1.081	9.6970	
BSW BODY DEPTH	USA BODY DEPTH	-0.061	6.4011	
BSW PIN WIDTH	USA RUMP WIDTH	-0.136	8.8782	
BSW RUMP ANGLE	USA RUMP ANGLE	-1.190	6.0731	

BSW FOOT ANGLE	USA FOOT ANGLE	-0.167	9.9858
BSW HEEL DEPTH	USA HEEL DEPTH	-0.069	10.2967
BSW REAR LEGS SIDE VIEW	USA REAR LEG SET	-0.233	9.7797
BSW UDDER DEPTH	USA UDDER DEPTH	-0.407	5.3363
BSW MEDIAN SUSPENSORY	USA UDDER CLEFT	0.499	6.4435
BSW FORE ATTACHMENT	USA FORE UDDER ATTACHMENT	0.115	5.3818
BSW FRONT TEAT PLACEMENT	USA FRONT TEAT PLACEMENT	-1.038	5.5421
BSW TEAT LENGTH	USA TEAT LENGTH	0.609	4.3335
BSW REAR ATTACHMENT HEIGHT	USA REAR UDDER HEIGHT	-1.416	5.4887
BSW REAR ATTACHMENT WIDTH	USA REAR UDDER WIDTH	-1.140	7.2991
BSW REAR TEAT PLACEMENT	USA REAR TEAT PLACEMENT	-0.674	5.2435
BSW ANGULARITY	USA ANGULARITY	-0.305	5.8476

CALCULATION OF FAT% AND PROTEIN% FOR DECEMBER 2019

BREED	BMILK	BFAT	BPRT
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AYS	7815	325	264
BSW	8623	365	304
CN	6050	262	214
GUE	6678	309	230
JER	6768	345	260
HOL	10402	408	336
MS	6633	264	221

$$EBVFAT\% = 200 * [(BFAT+EBVFAT*0.5) / (BMILK+EBVMILK*0.5) - (BFAT/BMILK)]$$

$$EBVPROT\% = 200 * [(BPRT+EBVPRT*0.5) / (BMILK+EBVMILK*0.5) - (BPRT/BMILK)]$$

EXAMPLE:

A HOLSTEIN bull has EBV MILK=+1000, EBVFAT=+50, EBVPROT=+40

$$\begin{aligned}
 EBVFAT\% &= 200 * [(408+50*0.5) / (10402+1000*0.5) - (408 / 1E4)] \\
 &= 200 * [(408+25) / (10402+500) - (0.03922)] \\
 &= 200 * [0.03972 - 0.03922] \\
 &= 200 * 0.00049 \\
 &= 0.10
 \end{aligned}$$

$$\begin{aligned}
 EBVPROT\% &= 200 * [(336+40*0.5) / (10402+1000*0.5) - (336 / 1E4)] \\
 &= 200 * [(336+20) / (10402+500) - (0.03230)] \\
 &= 200 * [0.03265 - 0.03230] \\
 &= 200 * 0.00035 \\
 &= 0.07
 \end{aligned}$$