Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Healthy Retiree; Adjusted 104%Male/103%Female; Set Forward 1 year; MP-2021 - Projected to 2040
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Service Retirement

Age	Age of Contingent Annuitant																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	0.9927	0.9930	0.9932	0.9935	0.9937	0.9940	0.9942	0.9945	0.9947	0.9949	0.9951	0.9953	0.9955	0.9957	0.9959	0.9960	0.9962
2	0.9921	0.9924	0.9927	0.9930	0.9933	0.9935	0.9938	0.9940	0.9943	0.9945	0.9947	0.9950	0.9952	0.9954	0.9956	0.9957	0.9959
3	0.9915	0.9918	0.9921	0.9924	0.9927	0.9930	0.9933	0.9936	0.9938	0.9941	0.9943	0.9946	0.9948	0.9950	0.9952	0.9954	0.9956
4	0.9909	0.9912	0.9915	0.9918	0.9921	0.9925	0.9928	0.9930	0.9933	0.9936	0.9939	0.9941	0.9944	0.9946	0.9948	0.9950	0.9952
5	0.9902	0.9905	0.9908	0.9912	0.9915	0.9918	0.9922	0.9925	0.9928	0.9931	0.9934	0.9936	0.9939	0.9942	0.9944	0.9946	0.9949
6	0.9894	0.9898	0.9901	0.9905	0.9908	0.9912	0.9915	0.9919	0.9922	0.9925	0.9928	0.9931	0.9934	0.9937	0.9939	0.9942	0.9944
7	0.9886	0.9890	0.9894	0.9897	0.9901	0.9905	0.9908	0.9912	0.9915	0.9919	0.9922	0.9925	0.9928	0.9931	0.9934	0.9937	0.9940
8	0.9877	0.9881	0.9885	0.9889	0.9893	0.9897	0.9901	0.9905	0.9909	0.9912	0.9916	0.9919	0.9922	0.9926	0.9929	0.9932	0.9935
9	0.9868	0.9872	0.9876	0.9881	0.9885	0.9889	0.9893	0.9897	0.9901	0.9905	0.9909	0.9912	0.9916	0.9919	0.9923	0.9926	0.9929
10	0.9858	0.9863	0.9867	0.9871	0.9876	0.9880	0.9884	0.9889	0.9893	0.9897	0.9901	0.9905	0.9909	0.9912	0.9916	0.9920	0.9923
11	0.9848	0.9853	0.9857	0.9862	0.9866	0.9871	0.9875	0.9880	0.9884	0.9889	0.9893	0.9897	0.9901	0.9905	0.9909	0.9913	0.9916
12	0.9837	0.9842	0.9846	0.9851	0.9856	0.9861	0.9865	0.9870	0.9875	0.9879	0.9884	0.9888	0.9893	0.9897	0.9901	0.9905	0.9909
13	0.9825	0.9830	0.9835	0.9840	0.9845	0.9850	0.9855	0.9860	0.9865	0.9870	0.9875	0.9879	0.9884	0.9889	0.9893	0.9897	0.9902
14	0.9813	0.9818	0.9823	0.9829	0.9834	0.9839	0.9844	0.9849	0.9854	0.9859	0.9865	0.9870	0.9874	0.9879	0.9884	0.9889	0.9893
15	0.9801	0.9806	0.9811	0.9816	0.9822	0.9827	0.9832	0.9838	0.9843	0.9849	0.9854	0.9859	0.9864	0.9870	0.9875	0.9880	0.9884
16	0.9787	0.9793	0.9798	0.9804	0.9809	0.9815	0.9820	0.9826	0.9831	0.9837	0.9843	0.9848	0.9854	0.9859	0.9864	0.9870	0.9875
17	0.9774	0.9779	0.9785	0.9790	0.9796	0.9802	0.9807	0.9813	0.9819	0.9825	0.9831	0.9837	0.9842	0.9848	0.9854	0.9859	0.9865
A 18	0.9759	0.9765	0.9770	0.9776	0.9782	0.9788	0.9794	0.9800	0.9806	0.9812	0.9818	0.9824	0.9831	0.9837	0.9843	0.9848	0.9854
g 19	0.9744	0.9750	0.9756	0.9762	0.9768	0.9774	0.9780	0.9786	0.9792	0.9799	0.9805	0.9811	0.9818	0.9824	0.9830	0.9837	0.9843
e 20	0.9728	0.9734	0.9740	0.9746	0.9752	0.9759	0.9765	0.9771	0.9778	0.9784	0.9791	0.9798	0.9804	0.9811	0.9818	0.9824	0.9831
21	0.9711	0.9717	0.9723	0.9730	0.9736	0.9742	0.9749	0.9756	0.9762	0.9769	0.9776	0.9783	0.9790	0.9797	0.9804	0.9810	0.9817
o 22	0.9694	0.9700	0.9706	0.9712	0.9719	0.9725	0.9732	0.9739	0.9746	0.9753	0.9760	0.9767	0.9774	0.9781	0.9789	0.9796	0.9803
f 23	0.9675	0.9681	0.9687	0.9694	0.9700	0.9707	0.9714	0.9721	0.9728	0.9735	0.9743	0.9750	0.9757	0.9765	0.9772	0.9780	0.9788
24	0.9655	0.9661	0.9668	0.9674	0.9681	0.9688	0.9695	0.9702	0.9710	0.9717	0.9724	0.9732	0.9740	0.9747	0.9755	0.9763	0.9771
M 25	0.9634	0.9640	0.9647	0.9654	0.9661	0.9668	0.9675	0.9682	0.9690	0.9697	0.9705	0.9713	0.9721	0.9729	0.9737	0.9745	0.9753
e 26	0.9612	0.9619	0.9625	0.9632	0.9639	0.9647	0.9654	0.9661	0.9669	0.9677	0.9685	0.9693	0.9701	0.9709	0.9718	0.9726	0.9735
m 27	0.9589	0.9596	0.9603	0.9610	0.9617	0.9624	0.9632	0.9639	0.9647	0.9655	0.9663	0.9672	0.9680	0.9689	0.9697	0.9706	0.9715
b 28	0.9565	0.9572	0.9579	0.9586	0.9594	0.9601	0.9609	0.9616	0.9624	0.9633	0.9641	0.9649	0.9658	0.9667	0.9676	0.9685	0.9694
e 29	0.9540	0.9547	0.9554	0.9562	0.9569	0.9577	0.9584	0.9592	0.9600	0.9609	0.9617	0.9626	0.9635	0.9644	0.9653	0.9662	0.9672
r 30	0.9514	0.9521	0.9528	0.9536	0.9543	0.9551	0.9559	0.9567	0.9575	0.9584	0.9593	0.9601	0.9610	0.9620	0.9629	0.9639	0.9648
31	0.9487	0.9494	0.9501	0.9509	0.9516	0.9524	0.9532	0.9541	0.9549	0.9558	0.9567	0.9576	0.9585	0.9594	0.9604	0.9614	0.9624
32	0.9458	0.9466	0.9473	0.9481	0.9488	0.9496	0.9504	0.9513	0.9521	0.9530	0.9539	0.9548	0.9558	0.9568	0.9577	0.9587	0.9598
33	0.9429	0.9436	0.9443	0.9451	0.9459	0.9467	0.9475	0.9484	0.9492	0.9501	0.9511	0.9520	0.9530	0.9539	0.9550	0.9560	0.9570
34	0.9397	0.9405	0.9412	0.9420	0.9428	0.9436	0.9445	0.9453	0.9462	0.9471	0.9481	0.9490	0.9500	0.9510	0.9520	0.9531	0.9541
35	0.9365	0.9372	0.9380	0.9388	0.9396	0.9404	0.9412	0.9421	0.9430	0.9440	0.9449	0.9459	0.9469	0.9479	0.9489	0.9500	0.9511
36	0.9330	0.9338	0.9346	0.9354	0.9362	0.9370	0.9379	0.9388	0.9397	0.9406	0.9416	0.9426	0.9436	0.9446	0.9457	0.9468	0.9479
37	0.9295	0.9302	0.9310	0.9318	0.9326	0.9335	0.9344	0.9353	0.9362	0.9372	0.9381	0.9391	0.9402	0.9412	0.9423	0.9434	0.9446
38	0.9257	0.9265	0.9273	0.9281	0.9289	0.9298	0.9307	0.9316	0.9325	0.9335	0.9345	0.9355	0.9366	0.9376	0.9387	0.9399	0.9410
39	0.9218	0.9226	0.9233	0.9242	0.9250	0.9259	0.9268	0.9277	0.9287	0.9297	0.9307	0.9317	0.9328	0.9339	0.9350	0.9361	0.9373
40	0.9177	0.9184	0.9192	0.9201	0.9209	0.9218	0.9227	0.9237	0.9246	0.9256	0.9266	0.9277	0.9288	0.9299	0.9310	0.9322	0.9334
41	0.9133	0.9141	0.9149	0.9158	0.9166	0.9175	0.9184	0.9194	0.9204	0.9214	0.9224	0.9235	0.9246	0.9257	0.9269	0.9280	0.9293
42	0.9088	0.9096	0.9104	0.9113	0.9121	0.9130	0.9140	0.9149	0.9159	0.9169	0.9180	0.9191	0.9202	0.9213	0.9225	0.9237	0.9249
43	0.9040	0.9048	0.9056	0.9065	0.9074	0.9083	0.9092	0.9102	0.9112	0.9122	0.9133	0.9144	0.9155	0.9167	0.9179	0.9191	0.9203
44	0.8990	0.8998	0.9007	0.9015	0.9024	0.9033	0.9043	0.9053	0.9063	0.9073	0.9084	0.9095	0.9106	0.9118	0.9130	0.9142	0.9155
45	0.8938	0.8946	0.8954	0.8963	0.8972	0.8981	0.8991	0.9000	0.9011	0.9021	0.9032	0.9043	0.9055	0.9067	0.9079	0.9091	0.9104
46	0.8882	0.8891	0.8899	0.8908	0.8917	0.8926	0.8936	0.8946	0.8956	0.8967	0.8978	0.8989	0.9001	0.9013	0.9025	0.9038	0.9051
47	0.8824	0.8833	0.8841	0.8850	0.8859	0.8868	0.8878	0.8888	0.8899	0.8909	0.8920	0.8932	0.8944	0.8956	0.8968	0.8981	0.8994
48	0.8763	0.8772	0.8780	0.8789	0.8798	0.8808	0.8817	0.8828	0.8838	0.8849	0.8860	0.8872	0.8884	0.8896	0.8908	0.8921	0.8935
49	0.8699	0.8708	0.8716	0.8725	0.8734	0.8744	0.8754	0.8764	0.8775	0.8785	0.8797	0.8808	0.8820	0.8833	0.8846	0.8859	0.8872
50	0.8639	0.8647	0.8655	0.8664	0.8674	0.8683	0.8693	0.8703	0.8714	0.8725	0.8736	0.8748	0.8760	0.8773	0.8786	0.8799	0.8813
51	0.8575	0.8583	0.8592	0.8601	0.8610	0.8620	0.8630	0.8640	0.8651	0.8662	0.8673	0.8685	0.8697	0.8710	0.8723	0.8736	0.8750
52	0.8508	0.8517	0.8525	0.8534	0.8544	0.8553	0.8563	0.8574	0.8584	0.8596	0.8607	0.8619	0.8631	0.8644	0.8657	0.8671	0.8685
53	0.8439	0.8447	0.8456	0.8465	0.8474	0.8484	0.8494	0.8504	0.8515	0.8526	0.8538	0.8550	0.8562	0.8575	0.8589	0.8602	0.8616
54	0.8366	0.8375	0.8383	0.8392	0.8402	0.8411	0.8422	0.8432	0.8443	0.8454	0.8466	0.8478	0.8490	0.8503	0.8517	0.8531	0.8545
55	0.8291	0.8299	0.8308	0.8317	0.8326	0.8336	0.8346	0.8357	0.8367	0.8379	0.8390	0.8403	0.8415	0.8428	0.8442	0.8456	0.8470
56	0.8212	0.8220	0.8229	0.8238	0.8247	0.8257	0.8267	0.8278	0.8289	0.8300	0.8312	0.8324	0.8337	0.8350	0.8363	0.8377	0.8392
57	0.8130	0.8138	0.8147	0.8156	0.8165	0.8175	0.8185	0.8195	0.8206	0.8218	0.8230	0.8242	0.8255	0.8268	0.8281	0.8295	0.8310
58	0.8044	0.8052	0.8061	0.8070	0.8079	0.8089	0.8099	0.8110	0.8121	0.8132	0.8144	0.8156	0.8169	0.8182	0.8196	0.8210	0.8225
59	0.7954	0.7962	0.7971	0.7980	0.7989	0.7999	0.8009	0.8020	0.8031	0.8042	0.8054	0.8067	0.8079	0.8093	0.8106	0.8121	0.8135
A 60	0.7861	0.7869	0.7878	0.7887	0.7896	0.7906	0.7916	0.7926	0.7937	0.7949	0.7961	0.7973	0.7986	0.7999	0.8013	0.8027	0.8042
g 61	0.7763	0.7771	0.7780	0.7789	0.7798	0.7808	0.7818	0.7829	0.7840	0.7851	0.7863	0.7875	0.7888	0.7901	0.7915	0.7929	0.7944
e 62	0.7661	0.7669	0.7678	0.7687	0.7696	0.7706	0.7716	0.7726	0.7737	0.7749	0.7761	0.7773	0.7786	0.7799	0.7813	0.7827	0.7842
63	0.7554	0.7562	0.7571	0.7580	0.7589	0.7599	0.7609	0.7619	0.7630	0.7642	0.7654	0.7666	0.7679	0.7692	0.7706	0.7720	0.7735
o 64	0.7443	0.7451	0.7459	0.7468	0.7477	0.7487	0.7497	0.7508	0.7518	0.7530	0.7542	0.7554	0.7567	0.7580	0.7594	0.7608	0.7623
f 65	0.7326	0.7334	0.7343	0.7351	0.7361	0.7370	0.7380	0.7391	0.7401	0.7413	0.7425	0.7437	0.7450	0.7463	0.7477	0.7491	0.7506
66	0.7204	0.7212	0.7221	0.7230	0.7239	0.7248	0.7258	0.7268	0.7279	0.7290	0.7302	0.7314	0.7327	0.7340	0.7354	0.7368	0.7383
M 67	0.7077	0.7085	0.7094	0.7102	0.7111	0.7121	0.7131	0.7141	0.7152	0.7163	0.7174	0.7187	0.7199	0.7212	0.7226	0.7240	0.7255
e 68	0.6945	0.6953	0.6961	0.6970	0.6979	0.6988	0.6998	0.7008	0.7019	0.7030	0.7041	0.7053	0.7066	0.7079	0.7093	0.7107	0.7122
m 69	0.6807	0.6815	0.6823	0.6831	0.6840	0.6850	0.6859	0.6869	0.6880	0.6891	0.6902	0.6914	0.6927	0.6940	0.6953	0.6968	0.6982
b 70	0.6663	0.6671	0.6679	0.6687	0.6696	0.6706	0.6715	0.6725	0.6736	0.6747	0.6758	0.6770	0.6782	0.6795	0.6809	0.6823	0.6837
e 71	0.6514	0.6522	0.6530	0.6538	0.6547	0.6556	0.6565	0.6575	0.6586	0.6597	0.6608	0.6620	0.6632	0.6645	0.6658	0.6672	0.6686
r 72	0.6359	0.6367	0.6375	0.6383	0.6392	0.6401	0.6410	0.6420	0.6430	0.6441	0.6452	0.6464	0.6476	0.6488	0.6501	0.6515	0.6530
73	0.6199	0.6206	0.6214	0.6222	0.6231	0.6240	0.6249	0.6259	0.6269	0.6279	0.6290	0.6302	0.6314	0.6326	0.6339	0.6353	0.6367
74	0.6033	0.6040	0.6048	0.6056	0.6064	0.6073	0.6082	0.6092	0.6102	0.6112	0.6123	0.6134	0.6146	0.6159	0.6171	0.6185	0.6199
75	0.5861	0.5869	0.5876	0.5884	0.5892	0.5901	0.5910	0.5920	0.5929	0.5940	0.5950	0.5962	0.5973	0.5985	0.5998	0.6011	0.6025
76	0.5685	0.5692	0.5699	0.5707	0.5715	0.5724	0.5733	0.5742	0.5752	0.5762	0.5772	0.5783	0.5795	0.5807	0.5819	0.5832	0.5846
77	0.5503	0.5510	0.5518	0.5525	0.5533	0.5542	0.5550	0.5559	0.5569	0.5579	0.5589	0.5600	0.5611	0.5623	0.5635	0.5648	0.5661
78	0.5317	0.5324	0.5331	0.5339	0.5347	0.5355	0.5363	0.5372	0.5381	0.5391	0.5401	0.5412	0.5423	0.5434	0.5446	0.5459	0.5472
79	0.5127	0.5133	0.5140	0.5148	0.5155	0.5163	0.5172	0.5181	0.5190	0.5199	0.5209	0.5219	0.5230	0.5241	0.5253	0.5265	0.5278
80	0.4933	0.4939	0.4946	0.4953	0.4961	0.4969	0.4977	0.4985	0.4994	0.5003	0.5013	0.5023	0.5034	0.5045	0.5056	0.5068	0.5080
81	0.4736	0.4742	0.4749	0.4756	0.4763	0.4771	0.4779	0.4787	0.4796	0.4805	0.4814	0.4824	0.4834	0.4845	0.4856	0.4867	0.4880
82	0.4537	0.4544	0.4550	0.4557	0.4564	0.4571	0.4579	0.4587	0.4595	0.4604	0.4613	0.4623	0.4633	0.4643	0.4654	0.4665	0.4677
83	0.4338	0.4344	0.4351	0.4357	0.4364	0.4371	0.4379	0.4386	0.4395	0.4403	0.4412	0.4421	0.4431	0.4441	0.4451	0.4462	0.4474
84	0.4140	0.4146	0.4152	0.4158	0.4165	0.4172	0.4179	0.4186	0.4194	0.4203	0.4211	0.4220	0.4229	0.4239	0.4249	0.4260	0.4271
85	0.3943	0.3949	0.3955	0.3961	0.3967	0.3974	0.3981	0.3988	0.3996	0.4004	0.4012	0.4021	0.4030	0.4039	0.4049	0.4059	0.4070
86	0.3750	0.3755	0.3761	0.3767	0.3773	0.3779	0.3786	0.3793	0.3800	0.3808	0.3816	0.3824	0.3833	0.3842	0.3851	0.3861	0.3872
87	0.3560	0.3566	0.3571	0.3577	0.3583	0.3589	0.3595	0.3602	0.3609	0.3616	0.3624	0.3632	0.3640	0.3649	0.3658	0.3668	0.3678
88	0.3377	0.3382	0.3387	0.3392	0.3398	0.3404	0.3410	0.3416	0.3423	0.3430	0.3438	0.3445	0.3453	0.3462	0.3470	0.3480	0.3489
89	0.3199	0.3204	0.3209	0.3214	0.3220	0.3225	0.3231	0.3237	0.3244	0.3251	0.3258	0.3265	0.3273	0.3281	0.3289	0.3298	0.3307
90	0.3029	0.3034	0.3038	0.3043	0.3049	0.3054	0.3060	0.3066	0.3072	0.3078	0.3085	0.3092	0.3100	0.3107	0.3115	0.3124	0.3132
91	0.2867	0.2871	0.2876	0.2881	0.2886	0.2891	0.2896	0.2902	0.2908	0.2914	0.2921	0.2927	0.2934	0.2942	0.2949	0.2957	0.2966
92	0.2713	0.2717	0.2721	0.2726	0.2731	0.2736	0.2741	0.2746	0.2752	0.2758	0.2764	0.2770	0.2777	0.2784	0.2791	0.2799	0.2807
93	0.2566	0.2570	0.2574	0.2579	0.2583	0.2588	0.2593	0.2598	0.2603	0.2609	0.2615	0.2621	0.2628	0.2634	0.2641	0.2648	0.2656
94	0.2427	0.2430	0.2434	0.2439	0.2443	0.2447	0.2452	0.2457	0.2462	0.2468	0.2473	0.2479	0.2485	0.2492	0.2498	0.2505	0.2512
95	0.2293	0.2297	0.2301	0.2304	0.2309	0.2313	0.2317	0.2322	0.2327	0.2332	0.2338	0.2343	0.2349	0.2355	0.2361	0.2368	0.2375
96	0.2168	0.2171	0.2175	0.2179	0.2183	0.2187	0.2191	0.2196	0.2200	0.2205	0.2210	0.2216	0.2221	0.2227	0.2233	0.2239	0.2246
97	0.2050	0.2053	0.2056	0.2060	0.2064	0.2067	0.2072	0.2076	0.2080	0.2085	0.2090	0.2095	0.2100	0.2106	0.2111	0.2117	0.2124
98	0.1938	0.1942	0.1945	0.1948	0.1952	0.1955	0.1959	0.1963	0.1968	0.1972	0.1977	0.1982	0.1987	0.1992	0.1997	0.2003	0.2009
99	0.1835	0.1838	0.1841	0.1844	0.1847	0.1851	0.1854	0.1858	0.1862	0.1867	0.1871	0.1876	0.1880	0.1885	0.1891	0.1896	0.1902
100	0.1738	0.1741	0.1744	0.1747	0.1750	0.1754	0.1757	0.1761	0.1765	0.1769	0.1773	0.1778	0.1782	0.1787	0.1792	0.1797	0.1802

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Healthy Retiree; Adjusted 104%Male/103%Female; Set Forward 1 year; MP-2021 - Projected to 2040
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Service Retirement

Age	Age of Contingent Annuitant																	
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	0.9963	0.9965	0.9966	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9980
2	0.9961	0.9962	0.9964	0.9965	0.9967	0.9968	0.9969	0.9970	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9978	0.9979
3	0.9958	0.9959	0.9961	0.9963	0.9964	0.9966	0.9967	0.9968	0.9970	0.9971	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978
4	0.9954	0.9956	0.9958	0.9960	0.9961	0.9963	0.9965	0.9966	0.9967	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974	0.9975	0.9976
5	0.9951	0.9953	0.9955	0.9957	0.9958	0.9960	0.9962	0.9963	0.9965	0.9966	0.9968	0.9969	0.9970	0.9971	0.9973	0.9974	0.9975
6	0.9947	0.9949	0.9951	0.9953	0.9955	0.9957	0.9959	0.9960	0.9962	0.9964	0.9965	0.9967	0.9968	0.9969	0.9970	0.9972	0.9973
7	0.9942	0.9945	0.9947	0.9949	0.9951	0.9953	0.9955	0.9957	0.9959	0.9961	0.9962	0.9964	0.9965	0.9967	0.9968	0.9969	0.9971
8	0.9937	0.9940	0.9943	0.9945	0.9947	0.9950	0.9952	0.9954	0.9956	0.9957	0.9959	0.9961	0.9963	0.9964	0.9966	0.9967	0.9968
9	0.9932	0.9935	0.9938	0.9940	0.9943	0.9945	0.9948	0.9950	0.9952	0.9954	0.9956	0.9958	0.9959	0.9961	0.9963	0.9964	0.9966
10	0.9926	0.9929	0.9932	0.9935	0.9938	0.9941	0.9943	0.9946	0.9948	0.9950	0.9952	0.9954	0.9956	0.9958	0.9960	0.9961	0.9963
11	0.9920	0.9923	0.9927	0.9930	0.9933	0.9936	0.9938	0.9941	0.9943	0.9946	0.9948	0.9950	0.9952	0.9954	0.9956	0.9958	0.9960
12	0.9913	0.9917	0.9920	0.9924	0.9927	0.9930	0.9933	0.9936	0.9939	0.9941	0.9944	0.9946	0.9948	0.9951	0.9953	0.9955	0.9957
13	0.9906	0.9910	0.9913	0.9917	0.9921	0.9924	0.9927	0.9930	0.9933	0.9936	0.9939	0.9942	0.9944	0.9946	0.9949	0.9951	0.9953
14	0.9898	0.9902	0.9906	0.9910	0.9914	0.9918	0.9921	0.9925	0.9928	0.9931	0.9934	0.9937	0.9939	0.9942	0.9945	0.9947	0.9949
15	0.9889	0.9894	0.9898	0.9902	0.9907	0.9911	0.9914	0.9918	0.9922	0.9925	0.9928	0.9931	0.9934	0.9937	0.9940	0.9943	0.9945
16	0.9880	0.9885	0.9890	0.9894	0.9899	0.9903	0.9907	0.9911	0.9915	0.9919	0.9922	0.9926	0.9929	0.9932	0.9935	0.9938	0.9941
17	0.9870	0.9876	0.9881	0.9886	0.9891	0.9895	0.9900	0.9904	0.9908	0.9912	0.9916	0.9920	0.9923	0.9927	0.9930	0.9933	0.9936
A 18	0.9860	0.9866	0.9871	0.9877	0.9882	0.9887	0.9892	0.9896	0.9901	0.9905	0.9909	0.9913	0.9917	0.9921	0.9924	0.9928	0.9931
g 19	0.9849	0.9855	0.9861	0.9867	0.9872	0.9878	0.9883	0.9888	0.9893	0.9898	0.9902	0.9906	0.9911	0.9915	0.9918	0.9922	0.9926
e 20	0.9837	0.9843	0.9850	0.9856	0.9862	0.9868	0.9873	0.9879	0.9884	0.9889	0.9894	0.9899	0.9903	0.9908	0.9912	0.9916	0.9920
21	0.9824	0.9831	0.9837	0.9844	0.9850	0.9857	0.9863	0.9869	0.9874	0.9880	0.9885	0.9890	0.9895	0.9900	0.9904	0.9909	0.9913
o 22	0.9810	0.9817	0.9824	0.9831	0.9838	0.9845	0.9851	0.9857	0.9864	0.9869	0.9875	0.9881	0.9886	0.9891	0.9896	0.9901	0.9906
f 23	0.9795	0.9802	0.9810	0.9817	0.9824	0.9831	0.9838	0.9845	0.9852	0.9858	0.9864	0.9870	0.9876	0.9882	0.9887	0.9892	0.9897
24	0.9779	0.9787	0.9794	0.9802	0.9810	0.9817	0.9825	0.9832	0.9839	0.9846	0.9852	0.9859	0.9865	0.9871	0.9877	0.9883	0.9888
M 25	0.9761	0.9770	0.9778	0.9786	0.9794	0.9802	0.9810	0.9817	0.9825	0.9832	0.9840	0.9847	0.9853	0.9860	0.9866	0.9872	0.9878
e 26	0.9743	0.9752	0.9760	0.9769	0.9777	0.9785	0.9794	0.9802	0.9810	0.9818	0.9826	0.9833	0.9840	0.9847	0.9854	0.9861	0.9867
m 27	0.9724	0.9732	0.9741	0.9750	0.9759	0.9768	0.9777	0.9785	0.9794	0.9802	0.9810	0.9818	0.9826	0.9834	0.9841	0.9848	0.9855
b 28	0.9703	0.9712	0.9721	0.9731	0.9740	0.9749	0.9758	0.9768	0.9777	0.9785	0.9794	0.9803	0.9811	0.9819	0.9827	0.9835	0.9842
e 29	0.9681	0.9691	0.9700	0.9710	0.9720	0.9729	0.9739	0.9748	0.9758	0.9767	0.9777	0.9786	0.9795	0.9803	0.9812	0.9820	0.9828
r 30	0.9658	0.9668	0.9678	0.9688	0.9698	0.9708	0.9718	0.9728	0.9738	0.9748	0.9758	0.9768	0.9777	0.9786	0.9796	0.9804	0.9813
31	0.9634	0.9644	0.9654	0.9664	0.9675	0.9685	0.9696	0.9707	0.9717	0.9727	0.9738	0.9748	0.9758	0.9768	0.9778	0.9787	0.9797
32	0.9608	0.9618	0.9629	0.9640	0.9651	0.9662	0.9673	0.9683	0.9694	0.9705	0.9716	0.9727	0.9738	0.9748	0.9759	0.9769	0.9779
33	0.9581	0.9592	0.9603	0.9614	0.9625	0.9636	0.9648	0.9659	0.9670	0.9682	0.9693	0.9705	0.9716	0.9727	0.9738	0.9749	0.9760
34	0.9552	0.9563	0.9575	0.9586	0.9598	0.9609	0.9621	0.9633	0.9645	0.9657	0.9669	0.9681	0.9693	0.9704	0.9716	0.9727	0.9739
35	0.9522	0.9534	0.9545	0.9557	0.9569	0.9581	0.9593	0.9605	0.9618	0.9630	0.9643	0.9655	0.9668	0.9680	0.9692	0.9704	0.9716
36	0.9491	0.9502	0.9514	0.9526	0.9538	0.9551	0.9563	0.9576	0.9589	0.9602	0.9615	0.9628	0.9641	0.9654	0.9667	0.9679	0.9692
37	0.9457	0.9469	0.9481	0.9494	0.9506	0.9519	0.9532	0.9545	0.9558	0.9572	0.9585	0.9599	0.9612	0.9626	0.9639	0.9653	0.9666
38	0.9422	0.9434	0.9447	0.9459	0.9472	0.9485	0.9498	0.9512	0.9526	0.9540	0.9553	0.9568	0.9582	0.9596	0.9610	0.9624	0.9638
39	0.9385	0.9397	0.9410	0.9423	0.9436	0.9450	0.9463	0.9477	0.9491	0.9505	0.9520	0.9534	0.9549	0.9564	0.9579	0.9593	0.9608
40	0.9346	0.9359	0.9372	0.9385	0.9398	0.9412	0.9426	0.9440	0.9455	0.9469	0.9484	0.9499	0.9515	0.9530	0.9545	0.9561	0.9576
41	0.9305	0.9318	0.9331	0.9344	0.9358	0.9372	0.9387	0.9401	0.9416	0.9431	0.9446	0.9462	0.9478	0.9493	0.9509	0.9525	0.9542
42	0.9262	0.9275	0.9288	0.9302	0.9316	0.9330	0.9345	0.9360	0.9375	0.9390	0.9406	0.9422	0.9438	0.9455	0.9471	0.9488	0.9505
43	0.9216	0.9229	0.9243	0.9257	0.9271	0.9286	0.9301	0.9316	0.9332	0.9347	0.9364	0.9380	0.9397	0.9414	0.9431	0.9448	0.9465
44	0.9168	0.9182	0.9195	0.9210	0.9224	0.9239	0.9254	0.9270	0.9286	0.9302	0.9318	0.9335	0.9352	0.9370	0.9387	0.9405	0.9423
45	0.9118	0.9131	0.9145	0.9160	0.9174	0.9189	0.9205	0.9221	0.9237	0.9254	0.9270	0.9288	0.9305	0.9323	0.9341	0.9360	0.9378
46	0.9064	0.9078	0.9092	0.9107	0.9122	0.9137	0.9153	0.9169	0.9186	0.9203	0.9220	0.9237	0.9255	0.9274	0.9292	0.9311	0.9330
47	0.9008	0.9022	0.9036	0.9051	0.9066	0.9082	0.9098	0.9114	0.9131	0.9148	0.9166	0.9184	0.9202	0.9221	0.9240	0.9260	0.9279
48	0.8949	0.8963	0.8977	0.8992	0.9008	0.9024	0.9040	0.9057	0.9074	0.9091	0.9109	0.9128	0.9146	0.9166	0.9185	0.9205	0.9225
49	0.8886	0.8901	0.8915	0.8931	0.8946	0.8962	0.8979	0.8996	0.9013	0.9031	0.9049	0.9068	0.9087	0.9107	0.9127	0.9147	0.9168
50	0.8827	0.8841	0.8856	0.8872	0.8888	0.8904	0.8921	0.8938	0.8956	0.8974	0.8992	0.9011	0.9031	0.9051	0.9071	0.9092	0.9113
51	0.8764	0.8779	0.8794	0.8810	0.8826	0.8843	0.8860	0.8877	0.8895	0.8913	0.8932	0.8952	0.8971	0.8992	0.9012	0.9034	0.9055
52	0.8699	0.8714	0.8729	0.8745	0.8761	0.8778	0.8795	0.8813	0.8831	0.8850	0.8869	0.8889	0.8909	0.8930	0.8951	0.8972	0.8995
53	0.8631	0.8646	0.8661	0.8677	0.8694	0.8711	0.8728	0.8746	0.8765	0.8783	0.8803	0.8823	0.8843	0.8864	0.8886	0.8908	0.8930
54	0.8559	0.8575	0.8590	0.8606	0.8623	0.8640	0.8658	0.8676	0.8695	0.8714	0.8734	0.8754	0.8775	0.8796	0.8818	0.8840	0.8863
55	0.8485	0.8500	0.8516	0.8532	0.8549	0.8566	0.8584	0.8603	0.8621	0.8641	0.8661	0.8681	0.8702	0.8724	0.8746	0.8769	0.8792
56	0.8407	0.8422	0.8438	0.8455	0.8472	0.8489	0.8507	0.8526	0.8545	0.8564	0.8585	0.8605	0.8627	0.8649	0.8671	0.8694	0.8718
57	0.8325	0.8341	0.8357	0.8373	0.8390	0.8408	0.8426	0.8445	0.8464	0.8484	0.8505	0.8526	0.8547	0.8570	0.8592	0.8616	0.8640
58	0.8240	0.8255	0.8272	0.8288	0.8306	0.8324	0.8342	0.8361	0.8380	0.8400	0.8421	0.8442	0.8464	0.8487	0.8510	0.8534	0.8558
59	0.8151	0.8166	0.8183	0.8200	0.8217	0.8235	0.8254	0.8273	0.8292	0.8313	0.8334	0.8355	0.8377	0.8400	0.8423	0.8447	0.8472
A 60	0.8057	0.8073	0.8090	0.8107	0.8124	0.8142	0.8161	0.8180	0.8200	0.8221	0.8242	0.8263	0.8286	0.8309	0.8333	0.8357	0.8382
g 61	0.7960	0.7976	0.7992	0.8009	0.8027	0.8045	0.8064	0.8083	0.8104	0.8124	0.8145	0.8167	0.8190	0.8213	0.8237	0.8262	0.8287
e 62	0.7858	0.7874	0.7890	0.7907	0.7925	0.7944	0.7962	0.7982	0.8002	0.8023	0.8045	0.8067	0.8089	0.8113	0.8137	0.8162	0.8188
63	0.7751	0.7767	0.7783	0.7801	0.7818	0.7837	0.7856	0.7876	0.7896	0.7917	0.7939	0.7961	0.7984	0.8008	0.8032	0.8057	0.8083
o 64	0.7639	0.7655	0.7671	0.7689	0.7707	0.7725	0.7744	0.7764	0.7785	0.7806	0.7828	0.7850	0.7873	0.7897	0.7922	0.7947	0.7973
f 65	0.7521	0.7538	0.7554	0.7572	0.7590	0.7608	0.7627	0.7647	0.7668	0.7689	0.7711	0.7734	0.7757	0.7781	0.7806	0.7831	0.7858
66	0.7399	0.7415	0.7432	0.7449	0.7467	0.7486	0.7505	0.7525	0.7546	0.7567	0.7589	0.7612	0.7635	0.7659	0.7684	0.7710	0.7736
M 67	0.7271	0.7287	0.7304	0.7321	0.7339	0.7358	0.7377	0.7397	0.7418	0.7439	0.7461	0.7484	0.7508	0.7532	0.7557	0.7583	0.7609
e 68	0.7137	0.7153	0.7170	0.7187	0.7205	0.7224	0.7243	0.7263	0.7284	0.7305	0.7328	0.7350	0.7374	0.7399	0.7424	0.7450	0.7476
m 69	0.6998	0.7014	0.7030	0.7047	0.7065	0.7084	0.7103	0.7123	0.7144	0.7166	0.7188	0.7211	0.7235	0.7259	0.7284	0.7311	0.7337
b 70	0.6852	0.6868	0.6885	0.6902	0.6920	0.6939	0.6958	0.6978	0.6999	0.7020	0.7042	0.7065	0.7089	0.7114	0.7139	0.7165	0.7192
e 71	0.6701	0.6717	0.6734	0.6751	0.6769	0.6787	0.6806	0.6826	0.6847	0.6868	0.6891	0.6914	0.6937	0.6962	0.6987	0.7014	0.7041
r 72	0.6545	0.6560	0.6576	0.6593	0.6611	0.6630	0.6649	0.6669	0.6689	0.6711	0.6733	0.6756	0.6779	0.6804	0.6829	0.6856	0.6883
73	0.6382	0.6397	0.6413	0.6430	0.6448	0.6466	0.6485	0.6505	0.6525	0.6547	0.6569	0.6592	0.6615	0.6640	0.6665	0.6691	0.6718
74	0.6213	0.6229	0.6245	0.6261	0.6279	0.6297	0.6316	0.6335	0.6355	0.6377	0.6399	0.6421	0.6445	0.6469	0.6495	0.6521	0.6548
75	0.6039	0.6054	0.6070	0.6087	0.6104	0.6122	0.6140	0.6160	0.6180	0.6201	0.6223	0.6245	0.6269	0.6293	0.6318	0.6344	0.6371
76	0.5860	0.5875	0.5890	0.5906	0.5923	0.5941	0.5959	0.5978	0.5998	0.6019	0.6041	0.6063	0.6086	0.6110	0.6135	0.6161	0.6188
77	0.5675	0.5690	0.5705	0.5721	0.5738	0.5755	0.5773	0.5792	0.5812	0.5832	0.5853	0.5875	0.5898	0.5922	0.5947	0.5973	0.5999
78	0.5486	0.5500	0.5515	0.5530	0.5547	0.5564	0.5582	0.5600	0.5619	0.5640	0.5661	0.5682	0.5705	0.5729	0.5753	0.5779	0.5805
79	0.5291	0.5305	0.5320	0.5335	0.5351	0.5368	0.5386	0.5404	0.5423	0.5443	0.5463	0.5485	0.5507	0.5530	0.5554	0.5580	0.5606
80	0.5093	0.5107	0.5121	0.5136	0.5152	0.5168	0.5185	0.5203	0.5222	0.5241	0.5262	0.5283	0.5305	0.5327	0.5351	0.5376	0.5402
81	0.4892	0.4906	0.4920	0.4934	0.4949	0.4965	0.4982	0.4999	0.5018	0.5037	0.5056	0.5077	0.5099	0.5121	0.5144	0.5169	0.5194
82	0.4689	0.4702	0.4716	0.4730	0.4745	0.4760	0.4777	0.4794	0.4811	0.4830	0.4849	0.4869	0.4890	0.4912	0.4935	0.4959	0.4984
83	0.4486	0.4498	0.4511	0.4525	0.4540	0.4555	0.4570	0.4587	0.4604	0.4622	0.4641	0.4661	0.4681	0.4702	0.4725	0.4748	0.4772
84	0.4283	0.4295	0.4307	0.4321	0.4335	0.4349	0.4365	0.4381	0.4397	0.4415	0.4433	0.4452	0.4472	0.4493	0.4514	0.4537	0.4561
85	0.4081	0.4093	0.4105	0.4118	0.4131	0.4146	0.4160	0.4176	0.4192	0.4209	0.4226	0.4245	0.4264	0.4284	0.4305	0.4327	0.4350
86	0.3882	0.3894	0.3906	0.3918	0.3931	0.3945	0.3959	0.3974	0.3989	0.4006	0.4023	0.4041	0.4059	0.4079	0.4099	0.4120	0.4143
87	0.3688	0.3699	0.3710	0.3722	0.3735	0.3748	0.3762	0.3776	0.3791	0.3807	0.3823	0.3840	0.3858	0.3877	0.3897	0.3917	0.3939
88	0.3499	0.3509	0.3520	0.3532	0.3544	0.3557	0.3570	0.3584	0.3598	0.3613	0.3629	0.3645	0.3663	0.3681	0.3700	0.3720	0.3740
89	0.3316	0.3327	0.3337	0.3348	0.3360	0.3372	0.3384	0.3398	0.3411	0.3426	0.3441	0.3457	0.3474	0.3491	0.3509	0.3528	0.3548
90	0.3141	0.3151	0.3161	0.3172	0.3183	0.3194	0.3206	0.3219	0.3232	0.3246	0.3261	0.3276	0.3292	0.3309	0.3326	0.3345	0.3364
91	0.2975	0.2984	0.2993	0.3003	0.3014	0.3025	0.3037	0.3049	0.3062	0.3075	0.3089	0.3103	0.3119	0.3135	0.3152	0.3169	0.3188
92	0.2815	0.2824	0.2833	0.2843	0.2853	0.2864	0.2875	0.2886	0.2899	0.2911	0.2925	0.2939	0.2953	0.2969	0.2985	0.3002	0.3019
93	0.2664	0.2672	0.2681	0.2690	0.2700	0.2710	0.2721	0.2732	0.2744	0.2756	0.2768	0.2782	0.2796	0.2811	0.2826	0.2842	0.2859
94	0.2520	0.2528	0.2536	0.2545	0.2554	0.2564	0.2574	0.2585	0.2596	0.2608	0.2620	0.2633	0.2646	0.2660	0.2675	0.2690	0.2706
95	0.2382	0.2390	0.2398	0.2406	0.2415	0.2424	0.2434	0.2444	0.2455	0.2466	0.2477	0.2489	0.2502	0.2516	0.2530	0.2544	0.2560
96	0.2253	0.2260	0.2268	0.2276	0.2284	0.2293	0.2302	0.2312	0.2322	0.2332	0.2343	0.2355	0.2367	0.2380	0.2393	0.2407	0.2422
97	0.2130	0.2137	0.2144	0.2152	0.2160	0.2168	0.2177	0.2186	0.2196	0.2206	0.2217	0.2228	0.2239	0.2252	0.2264	0.2278	0.2292
98	0.2015	0.2022	0.2029	0.2036	0.2044	0.2052	0.2060	0.2069	0.2078	0.2087	0.2098	0.2108	0.2119	0.2131	0.2143	0.2156	0.2169
99	0.1908	0.1914	0.1921	0.1928	0.1935	0.1942	0.1950	0.1959	0.1967	0.1977	0.1986	0.1996	0.2007	0.2018	0.2029	0.2042	0.2055
100	0.1808	0.1814	0.1820	0.1827	0.1834	0.1841	0.1849	0.1857	0.1865	0.1874	0.1883	0.1893	0.1903	0.1913	0.1924	0.1936	0.1948

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Healthy Retiree; Adjusted 104%Male/103%Female; Set Forward 1 year; MP-2021 - Projected to 2040
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Service Retirement

Age	Age of Contingent Annuitant																
	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
1	0.9981	0.9982	0.9983	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988	0.9988	0.9989	0.9989
2	0.9980	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988	0.9988	0.9989
3	0.9979	0.9980	0.9980	0.9981	0.9982	0.9983	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988
4	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9983	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988
5	0.9976	0.9977	0.9978	0.9978	0.9979	0.9980	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987
6	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9980	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9986	0.9986
7	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9983	0.9984	0.9985	0.9985
8	0.9970	0.9971	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9983	0.9984
9	0.9967	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974	0.9976	0.9977	0.9977	0.9978	0.9979	0.9980	0.9981	0.9982	0.9982	0.9983
10	0.9965	0.9966	0.9967	0.9969	0.9970	0.9971	0.9972	0.9974	0.9975	0.9976	0.9977	0.9978	0.9978	0.9979	0.9980	0.9981	0.9982
11	0.9962	0.9963	0.9965	0.9966	0.9968	0.9969	0.9970	0.9971	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9979	0.9980
12	0.9958	0.9960	0.9962	0.9963	0.9965	0.9966	0.9968	0.9969	0.9970	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979
13	0.9955	0.9957	0.9959	0.9960	0.9962	0.9964	0.9965	0.9967	0.9968	0.9969	0.9971	0.9972	0.9973	0.9974	0.9975	0.9976	0.9977
14	0.9951	0.9953	0.9955	0.9957	0.9959	0.9961	0.9962	0.9964	0.9966	0.9967	0.9968	0.9970	0.9971	0.9972	0.9973	0.9974	0.9975
15	0.9947	0.9950	0.9952	0.9954	0.9956	0.9958	0.9960	0.9961	0.9963	0.9964	0.9966	0.9967	0.9969	0.9970	0.9971	0.9973	0.9974
16	0.9943	0.9946	0.9948	0.9950	0.9952	0.9954	0.9956	0.9958	0.9960	0.9962	0.9963	0.9965	0.9966	0.9968	0.9969	0.9971	0.9972
17	0.9939	0.9941	0.9944	0.9946	0.9949	0.9951	0.9953	0.9955	0.9957	0.9959	0.9961	0.9963	0.9964	0.9966	0.9967	0.9969	0.9970
A 18	0.9934	0.9937	0.9940	0.9943	0.9945	0.9948	0.9950	0.9952	0.9954	0.9956	0.9958	0.9960	0.9962	0.9964	0.9965	0.9967	0.9968
g 19	0.9929	0.9932	0.9935	0.9938	0.9941	0.9944	0.9946	0.9949	0.9951	0.9953	0.9955	0.9957	0.9959	0.9961	0.9963	0.9965	0.9966
e 20	0.9923	0.9927	0.9930	0.9933	0.9936	0.9939	0.9942	0.9945	0.9947	0.9950	0.9952	0.9954	0.9956	0.9958	0.9960	0.9962	0.9964
21	0.9917	0.9921	0.9924	0.9928	0.9931	0.9934	0.9937	0.9940	0.9943	0.9946	0.9948	0.9951	0.9953	0.9955	0.9957	0.9959	0.9961
o 22	0.9910	0.9914	0.9918	0.9922	0.9925	0.9929	0.9932	0.9935	0.9938	0.9941	0.9944	0.9947	0.9949	0.9952	0.9954	0.9956	0.9958
f 23	0.9902	0.9907	0.9911	0.9915	0.9919	0.9923	0.9926	0.9930	0.9933	0.9936	0.9939	0.9942	0.9945	0.9947	0.9950	0.9952	0.9955
24	0.9893	0.9898	0.9903	0.9907	0.9912	0.9916	0.9920	0.9924	0.9927	0.9931	0.9934	0.9937	0.9940	0.9943	0.9946	0.9948	0.9951
M 25	0.9884	0.9889	0.9894	0.9899	0.9904	0.9908	0.9913	0.9917	0.9921	0.9924	0.9928	0.9931	0.9935	0.9938	0.9941	0.9944	0.9946
e 26	0.9873	0.9879	0.9885	0.9890	0.9895	0.9900	0.9905	0.9909	0.9914	0.9918	0.9922	0.9925	0.9929	0.9932	0.9936	0.9939	0.9942
m 27	0.9862	0.9868	0.9874	0.9880	0.9886	0.9891	0.9896	0.9901	0.9906	0.9910	0.9915	0.9919	0.9922	0.9926	0.9930	0.9933	0.9936
b 28	0.9849	0.9856	0.9863	0.9869	0.9875	0.9881	0.9887	0.9892	0.9897	0.9902	0.9907	0.9911	0.9916	0.9920	0.9924	0.9927	0.9931
e 29	0.9836	0.9843	0.9851	0.9858	0.9864	0.9871	0.9877	0.9883	0.9888	0.9893	0.9898	0.9903	0.9908	0.9912	0.9917	0.9921	0.9925
r 30	0.9821	0.9829	0.9837	0.9845	0.9852	0.9859	0.9866	0.9872	0.9878	0.9884	0.9889	0.9895	0.9900	0.9905	0.9909	0.9914	0.9918
31	0.9806	0.9814	0.9823	0.9831	0.9839	0.9846	0.9853	0.9860	0.9867	0.9873	0.9879	0.9885	0.9891	0.9896	0.9901	0.9906	0.9911
32	0.9788	0.9798	0.9807	0.9816	0.9824	0.9832	0.9840	0.9848	0.9855	0.9862	0.9869	0.9875	0.9881	0.9887	0.9892	0.9898	0.9903
33	0.9770	0.9780	0.9790	0.9799	0.9808	0.9817	0.9826	0.9834	0.9842	0.9849	0.9857	0.9864	0.9870	0.9877	0.9883	0.9888	0.9894
34	0.9750	0.9761	0.9771	0.9781	0.9791	0.9801	0.9810	0.9819	0.9827	0.9836	0.9844	0.9851	0.9858	0.9865	0.9872	0.9878	0.9884
35	0.9728	0.9740	0.9751	0.9762	0.9772	0.9783	0.9793	0.9802	0.9812	0.9821	0.9829	0.9837	0.9845	0.9853	0.9860	0.9867	0.9874
36	0.9705	0.9717	0.9729	0.9741	0.9752	0.9763	0.9774	0.9785	0.9795	0.9804	0.9814	0.9823	0.9831	0.9839	0.9847	0.9855	0.9862
37	0.9679	0.9692	0.9705	0.9718	0.9730	0.9742	0.9754	0.9765	0.9776	0.9786	0.9796	0.9806	0.9816	0.9825	0.9833	0.9841	0.9849
38	0.9652	0.9666	0.9680	0.9693	0.9706	0.9719	0.9731	0.9743	0.9755	0.9767	0.9778	0.9788	0.9798	0.9808	0.9818	0.9827	0.9835
39	0.9623	0.9637	0.9652	0.9666	0.9680	0.9694	0.9707	0.9720	0.9733	0.9745	0.9757	0.9768	0.9779	0.9790	0.9800	0.9810	0.9820
40	0.9591	0.9607	0.9622	0.9637	0.9652	0.9666	0.9681	0.9695	0.9708	0.9721	0.9734	0.9747	0.9759	0.9770	0.9781	0.9792	0.9802
41	0.9558	0.9574	0.9590	0.9606	0.9621	0.9637	0.9652	0.9667	0.9681	0.9696	0.9709	0.9723	0.9736	0.9748	0.9760	0.9772	0.9783
42	0.9521	0.9538	0.9555	0.9572	0.9588	0.9605	0.9621	0.9637	0.9652	0.9667	0.9682	0.9697	0.9711	0.9724	0.9737	0.9750	0.9762
43	0.9483	0.9500	0.9518	0.9535	0.9553	0.9570	0.9587	0.9604	0.9620	0.9637	0.9653	0.9668	0.9683	0.9698	0.9712	0.9726	0.9739
44	0.9441	0.9459	0.9478	0.9496	0.9514	0.9532	0.9550	0.9568	0.9586	0.9603	0.9620	0.9637	0.9653	0.9669	0.9684	0.9699	0.9713
45	0.9397	0.9416	0.9435	0.9454	0.9473	0.9492	0.9511	0.9530	0.9548	0.9567	0.9585	0.9603	0.9620	0.9637	0.9654	0.9670	0.9685
46	0.9350	0.9369	0.9389	0.9409	0.9429	0.9449	0.9469	0.9488	0.9508	0.9527	0.9547	0.9565	0.9584	0.9602	0.9620	0.9637	0.9654
47	0.9299	0.9320	0.9340	0.9361	0.9381	0.9402	0.9423	0.9444	0.9464	0.9485	0.9505	0.9525	0.9545	0.9564	0.9583	0.9602	0.9620
48	0.9246	0.9267	0.9288	0.9309	0.9331	0.9352	0.9374	0.9395	0.9417	0.9439	0.9460	0.9481	0.9502	0.9523	0.9543	0.9563	0.9583
49	0.9189	0.9210	0.9232	0.9254	0.9276	0.9299	0.9321	0.9344	0.9366	0.9389	0.9411	0.9434	0.9456	0.9478	0.9500	0.9521	0.9542
50	0.9135	0.9157	0.9179	0.9202	0.9225	0.9248	0.9271	0.9295	0.9318	0.9342	0.9365	0.9389	0.9412	0.9436	0.9459	0.9481	0.9504
51	0.9077	0.9100	0.9123	0.9146	0.9170	0.9194	0.9218	0.9242	0.9267	0.9291	0.9316	0.9341	0.9365	0.9390	0.9414	0.9438	0.9462
52	0.9017	0.9040	0.9064	0.9088	0.9112	0.9136	0.9161	0.9187	0.9212	0.9238	0.9263	0.9289	0.9315	0.9341	0.9366	0.9392	0.9417
53	0.8954	0.8977	0.9001	0.9026	0.9050	0.9076	0.9101	0.9127	0.9154	0.9180	0.9207	0.9234	0.9261	0.9288	0.9315	0.9342	0.9368
54	0.8887	0.8911	0.8935	0.8960	0.8986	0.9012	0.9038	0.9065	0.9092	0.9119	0.9147	0.9175	0.9203	0.9231	0.9260	0.9288	0.9316
55	0.8816	0.8841	0.8866	0.8891	0.8917	0.8944	0.8971	0.8999	0.9026	0.9055	0.9083	0.9112	0.9141	0.9171	0.9200	0.9230	0.9260
56	0.8742	0.8767	0.8793	0.8819	0.8845	0.8873	0.8900	0.8928	0.8957	0.8986	0.9016	0.9045	0.9076	0.9106	0.9137	0.9168	0.9199
57	0.8665	0.8690	0.8716	0.8742	0.8770	0.8797	0.8826	0.8854	0.8884	0.8914	0.8944	0.8975	0.9006	0.9038	0.9070	0.9102	0.9135
58	0.8583	0.8609	0.8635	0.8662	0.8690	0.8718	0.8747	0.8776	0.8806	0.8837	0.8868	0.8900	0.8932	0.8965	0.8998	0.9032	0.9066
59	0.8498	0.8524	0.8550	0.8578	0.8606	0.8635	0.8664	0.8694	0.8725	0.8756	0.8788	0.8820	0.8854	0.8887	0.8922	0.8956	0.8992
A 60	0.8408	0.8434	0.8461	0.8489	0.8517	0.8547	0.8577	0.8607	0.8638	0.8670	0.8703	0.8736	0.8770	0.8805	0.8840	0.8876	0.8913
g 61	0.8313	0.8340	0.8367	0.8396	0.8424	0.8454	0.8484	0.8516	0.8547	0.8580	0.8613	0.8647	0.8682	0.8718	0.8754	0.8791	0.8829
e 62	0.8214	0.8241	0.8269	0.8297	0.8327	0.8357	0.8387	0.8419	0.8451	0.8484	0.8518	0.8553	0.8589	0.8625	0.8662	0.8700	0.8739
63	0.8109	0.8137	0.8165	0.8194	0.8223	0.8254	0.8285	0.8317	0.8350	0.8383	0.8418	0.8453	0.8490	0.8527	0.8565	0.8604	0.8644
o 64	0.8000	0.8027	0.8056	0.8085	0.8115	0.8146	0.8177	0.8210	0.8243	0.8277	0.8312	0.8348	0.8385	0.8423	0.8462	0.8502	0.8543
f 65	0.7885	0.7912	0.7941	0.7970	0.8001	0.8032	0.8064	0.8096	0.8130	0.8164	0.8200	0.8236	0.8274	0.8313	0.8352	0.8393	0.8435
66	0.7764	0.7792	0.7821	0.7850	0.7881	0.7912	0.7944	0.7977	0.8011	0.8046	0.8082	0.8119	0.8157	0.8196	0.8237	0.8278	0.8321
M 67	0.7637	0.7665	0.7694	0.7724	0.7755	0.7786	0.7819	0.7852	0.7886	0.7922	0.7958	0.7995	0.8034	0.8074	0.8115	0.8157	0.8200
e 68	0.7504	0.7532	0.7562	0.7592	0.7623	0.7655	0.7687	0.7721	0.7755	0.7791	0.7827	0.7865	0.7904	0.7944	0.7986	0.8029	0.8073
m 69	0.7365	0.7394	0.7423	0.7453	0.7484	0.7516	0.7549	0.7583	0.7618	0.7653	0.7690	0.7728	0.7767	0.7808	0.7850	0.7894	0.7938
b 70	0.7220	0.7249	0.7278	0.7308	0.7340	0.7372	0.7405	0.7439	0.7474	0.7509	0.7546	0.7585	0.7624	0.7665	0.7708	0.7752	0.7797
e 71	0.7068	0.7097	0.7127	0.7157	0.7189	0.7221	0.7254	0.7288	0.7323	0.7359	0.7396	0.7434	0.7474	0.7515	0.7558	0.7602	0.7648
r 72	0.6911	0.6939	0.6969	0.6999	0.7031	0.7063	0.7096	0.7130	0.7165	0.7201	0.7239	0.7277	0.7317	0.7359	0.7402	0.7446	0.7492
73	0.6746	0.6775	0.6805	0.6835	0.6867	0.6899	0.6932	0.6966	0.7001	0.7037	0.7074	0.7113	0.7153	0.7195	0.7238	0.7282	0.7329
74	0.6576	0.6604	0.6634	0.6664	0.6696	0.6728	0.6761	0.6795	0.6830	0.6866	0.6903	0.6942	0.6982	0.7023	0.7067	0.7112	0.7158
75	0.6399	0.6427	0.6457	0.6487	0.6519	0.6551	0.6584	0.6618	0.6653	0.6689	0.6725	0.6764	0.6804	0.6845	0.6889	0.6934	0.6980
76	0.6216	0.6244	0.6274	0.6304	0.6335	0.6367	0.6400	0.6434	0.6469	0.6504	0.6541	0.6579	0.6619	0.6661	0.6704	0.6748	0.6795
77	0.6027	0.6055	0.6084	0.6114	0.6145	0.6177	0.6210	0.6244	0.6278	0.6313	0.6350	0.6388	0.6428	0.6469	0.6512	0.6556	0.6603
78	0.5832	0.5860	0.5889	0.5919	0.5950	0.5982	0.6014	0.6047	0.6082	0.6117	0.6153	0.6190	0.6230	0.6271	0.6313	0.6358	0.6404
79	0.5632	0.5660	0.5689	0.5719	0.5749	0.5780	0.5813	0.5846	0.5879	0.5914	0.5950	0.5987	0.6026	0.6066	0.6109	0.6153	0.6198
80	0.5428	0.5456	0.5484	0.5513	0.5543	0.5574	0.5606	0.5639	0.5672	0.5706	0.5741	0.5778	0.5817	0.5857	0.5898	0.5942	0.5987
81	0.5220	0.5247	0.5275	0.5304	0.5333	0.5364	0.5395	0.5427	0.5460	0.5494	0.5529	0.5565	0.5603	0.5642	0.5683	0.5726	0.5771
82	0.5009	0.5036	0.5063	0.5092	0.5121	0.5151	0.5182	0.5213	0.5246	0.5279	0.5313	0.5348	0.5385	0.5424	0.5465	0.5507	0.5551
83	0.4797	0.4823	0.4850	0.4878	0.4907	0.4936	0.4966	0.4997	0.5029	0.5061	0.5095	0.5129	0.5166	0.5204	0.5244	0.5285	0.5328
84	0.4585	0.4610	0.4637	0.4664	0.4692	0.4721	0.4751	0.4781	0.4812	0.4844	0.4876	0.4910	0.4946	0.4983	0.5022	0.5062	0.5105
85	0.4374	0.4399	0.4425	0.4451	0.4479	0.4507	0.4536	0.4566	0.4596	0.4627	0.4658	0.4691	0.4726	0.4762	0.4800	0.4840	0.4881
86	0.4166	0.4190	0.4215	0.4241	0.4268	0.4295	0.4323	0.4352	0.4382	0.4412	0.4442	0.4475	0.4508	0.4544	0.4581	0.4619	0.4660
87	0.3961	0.3985	0.4009	0.4034	0.4060	0.4087	0.4115	0.4143	0.4171	0.4200	0.4230	0.4261	0.4294	0.4328	0.4364	0.4402	0.4441
88	0.3762	0.3785	0.3808	0.3833	0.3858	0.3884	0.3911	0.3938	0.3966	0.3994	0.4023	0.4053	0.4084	0.4118	0.4152	0.4189	0.4227
89	0.3569	0.3591	0.3614	0.3637	0.3662	0.3687	0.3713	0.3740	0.3766	0.3794	0.3821	0.3851	0.3881	0.3913	0.3947	0.3982	0.4019
90	0.3384	0.3405	0.3427	0.3450	0.3473	0.3498	0.3523	0.3549	0.3575	0.3601	0.3628	0.3656	0.3685	0.3716	0.3749	0.3783	0.3818
91	0.3207	0.3227	0.3248	0.3270	0.3293	0.3317	0.3341	0.3366	0.3391	0.3416	0.3442	0.3469	0.3497	0.3527	0.3559	0.3591	0.3626
92	0.3038	0.3057	0.3078	0.3099	0.3121	0.3144	0.3167	0.3191	0.3215	0.3240	0.3264	0.3290	0.3318	0.3346	0.3377	0.3408	0.3441
93	0.2877	0.2895	0.2915	0.2935	0.2957	0.2978	0.3001	0.3024	0.3048	0.3071	0.3095	0.3120	0.3146	0.3174	0.3203	0.3233	0.3265
94	0.2723	0.2741	0.2760	0.2779	0.2800	0.2821	0.2843	0.2865	0.2887	0.2910	0.2933	0.2957	0.2982	0.3008	0.3036	0.3066	0.3096
95	0.2576	0.2593	0.2611	0.2630	0.2649	0.2670	0.2691	0.2712	0.2734	0.2755	0.2777	0.2800	0.2824	0.2850	0.2876	0.2904	0.2934
96	0.2438	0.2454	0.2471	0.2489	0.2508	0.2527	0.2547	0.2568	0.2589	0.2610	0.2630	0.2652	0.2675	0.2700	0.2726	0.2752	0.2781
97	0.2307	0.2322	0.2339	0.2356	0.2374	0.2392	0.2412	0.2432	0.2452	0.2471	0.2491	0.2512	0.2534	0.2558	0.2582	0.2608	0.2635
98	0.2183	0.2198	0.2214	0.2230	0.2247	0.2265	0.2284	0.2303	0.2322	0.2341	0.2360	0.2380	0.2401	0.2424	0.2447	0.2472	0.2498
99	0.2068	0.2082	0.2097	0.2113	0.2129	0.2146	0.2164	0.2182	0.2201	0.2219	0.2237	0.2257	0.2277	0.2298	0.2321	0.2344	0.2369
100	0.1961	0.1975	0.1989	0.2004	0.2020	0.2036	0.2053	0.2071	0.2088	0.2106	0.2123	0.2142	0.2161	0.2181	0.2203	0.2226	0.2249

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Healthy Retiree; Adjusted 104%Male/103%Female; Set Forward 1 year; MP-2021 - Projected to 2040
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Service Retirement

Age	Age of Contingent Annuitant																	
	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
1	0.9990	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994
2	0.9989	0.9990	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994
3	0.9989	0.9989	0.9990	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994
4	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994
5	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994
6	0.9987	0.9987	0.9988	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993
7	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993
8	0.9985	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992
9	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9988	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992
10	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9990	0.9991
11	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990
12	0.9980	0.9980	0.9981	0.9982	0.9983	0.9983	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989
13	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9983	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987	0.9988	0.9988	0.9989
14	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9986	0.9986	0.9987	0.9987	0.9988
15	0.9975	0.9976	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981	0.9982	0.9983	0.9983	0.9984	0.9985	0.9985	0.9986	0.9986	0.9987
16	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9986	0.9986
17	0.9971	0.9973	0.9974	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9984	0.9984	0.9985	0.9986
A 18	0.9970	0.9971	0.9972	0.9973	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9984	0.9984	0.9985
g 19	0.9968	0.9969	0.9971	0.9972	0.9973	0.9974	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9984	0.9985
e 20	0.9966	0.9967	0.9969	0.9970	0.9972	0.9973	0.9974	0.9975	0.9977	0.9978	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983	0.9984
21	0.9963	0.9965	0.9967	0.9968	0.9970	0.9971	0.9973	0.9974	0.9975	0.9976	0.9977	0.9979	0.9980	0.9981	0.9981	0.9982	0.9983
o 22	0.9960	0.9962	0.9964	0.9966	0.9967	0.9969	0.9971	0.9972	0.9973	0.9975	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9982
f 23	0.9957	0.9959	0.9961	0.9963	0.9965	0.9967	0.9968	0.9970	0.9971	0.9973	0.9974	0.9975	0.9977	0.9978	0.9979	0.9980	0.9981
24	0.9953	0.9955	0.9958	0.9960	0.9962	0.9964	0.9966	0.9967	0.9969	0.9971	0.9972	0.9973	0.9975	0.9976	0.9977	0.9978	0.9980
M 25	0.9949	0.9952	0.9954	0.9956	0.9958	0.9961	0.9963	0.9964	0.9966	0.9968	0.9970	0.9971	0.9973	0.9974	0.9975	0.9977	0.9978
e 26	0.9945	0.9947	0.9950	0.9952	0.9955	0.9957	0.9959	0.9961	0.9963	0.9965	0.9967	0.9969	0.9970	0.9972	0.9973	0.9975	0.9976
m 27	0.9940	0.9943	0.9945	0.9948	0.9951	0.9953	0.9956	0.9958	0.9960	0.9962	0.9964	0.9966	0.9968	0.9970	0.9971	0.9973	0.9974
b 28	0.9934	0.9938	0.9941	0.9944	0.9947	0.9949	0.9952	0.9954	0.9957	0.9959	0.9961	0.9963	0.9965	0.9967	0.9969	0.9971	0.9972
e 29	0.9928	0.9932	0.9935	0.9939	0.9942	0.9945	0.9948	0.9950	0.9953	0.9955	0.9958	0.9960	0.9962	0.9964	0.9966	0.9968	0.9970
r 30	0.9922	0.9926	0.9930	0.9933	0.9937	0.9940	0.9943	0.9946	0.9949	0.9952	0.9954	0.9957	0.9959	0.9961	0.9963	0.9966	0.9967
31	0.9915	0.9919	0.9923	0.9927	0.9931	0.9935	0.9938	0.9941	0.9944	0.9947	0.9950	0.9953	0.9956	0.9958	0.9960	0.9963	0.9965
32	0.9908	0.9912	0.9917	0.9921	0.9925	0.9929	0.9933	0.9936	0.9940	0.9943	0.9946	0.9949	0.9952	0.9954	0.9957	0.9960	0.9962
33	0.9899	0.9904	0.9909	0.9914	0.9918	0.9922	0.9927	0.9930	0.9934	0.9938	0.9941	0.9944	0.9948	0.9951	0.9953	0.9956	0.9959
34	0.9890	0.9896	0.9901	0.9906	0.9911	0.9915	0.9920	0.9924	0.9928	0.9932	0.9936	0.9939	0.9943	0.9946	0.9949	0.9952	0.9955
35	0.9880	0.9886	0.9892	0.9897	0.9903	0.9908	0.9913	0.9917	0.9922	0.9926	0.9930	0.9934	0.9938	0.9941	0.9945	0.9948	0.9951
36	0.9869	0.9876	0.9882	0.9888	0.9894	0.9899	0.9905	0.9910	0.9915	0.9919	0.9924	0.9928	0.9932	0.9936	0.9940	0.9943	0.9947
37	0.9857	0.9864	0.9871	0.9878	0.9884	0.9890	0.9896	0.9901	0.9907	0.9912	0.9917	0.9921	0.9926	0.9930	0.9934	0.9938	0.9942
38	0.9843	0.9851	0.9859	0.9866	0.9873	0.9880	0.9886	0.9892	0.9898	0.9904	0.9909	0.9914	0.9919	0.9923	0.9928	0.9932	0.9936
39	0.9829	0.9837	0.9846	0.9854	0.9861	0.9868	0.9875	0.9882	0.9888	0.9894	0.9900	0.9906	0.9911	0.9916	0.9921	0.9926	0.9930
40	0.9812	0.9822	0.9831	0.9839	0.9848	0.9856	0.9863	0.9870	0.9877	0.9884	0.9890	0.9896	0.9902	0.9908	0.9913	0.9918	0.9923
41	0.9794	0.9804	0.9814	0.9824	0.9833	0.9842	0.9850	0.9858	0.9865	0.9873	0.9880	0.9886	0.9893	0.9899	0.9904	0.9910	0.9915
42	0.9774	0.9785	0.9796	0.9807	0.9816	0.9826	0.9835	0.9844	0.9852	0.9860	0.9867	0.9875	0.9882	0.9888	0.9895	0.9901	0.9907
43	0.9752	0.9764	0.9776	0.9787	0.9798	0.9809	0.9818	0.9828	0.9837	0.9846	0.9854	0.9862	0.9869	0.9877	0.9884	0.9890	0.9897
44	0.9727	0.9741	0.9754	0.9766	0.9778	0.9789	0.9800	0.9810	0.9820	0.9830	0.9839	0.9848	0.9856	0.9864	0.9871	0.9879	0.9886
45	0.9700	0.9715	0.9729	0.9742	0.9755	0.9768	0.9779	0.9791	0.9802	0.9812	0.9822	0.9831	0.9841	0.9849	0.9858	0.9865	0.9873
46	0.9671	0.9686	0.9702	0.9716	0.9730	0.9744	0.9757	0.9769	0.9781	0.9792	0.9803	0.9814	0.9824	0.9833	0.9842	0.9851	0.9859
47	0.9638	0.9655	0.9671	0.9687	0.9703	0.9717	0.9731	0.9745	0.9758	0.9770	0.9782	0.9794	0.9805	0.9815	0.9825	0.9834	0.9843
48	0.9602	0.9620	0.9638	0.9655	0.9672	0.9688	0.9704	0.9718	0.9733	0.9746	0.9759	0.9772	0.9783	0.9795	0.9806	0.9816	0.9826
49	0.9562	0.9582	0.9601	0.9620	0.9638	0.9656	0.9673	0.9689	0.9704	0.9719	0.9733	0.9747	0.9760	0.9772	0.9784	0.9795	0.9806
50	0.9525	0.9547	0.9568	0.9588	0.9607	0.9626	0.9645	0.9662	0.9679	0.9695	0.9711	0.9726	0.9740	0.9754	0.9767	0.9779	0.9791
51	0.9485	0.9508	0.9531	0.9552	0.9574	0.9594	0.9614	0.9633	0.9652	0.9669	0.9686	0.9703	0.9718	0.9733	0.9747	0.9761	0.9774
52	0.9442	0.9466	0.9490	0.9514	0.9537	0.9559	0.9580	0.9601	0.9621	0.9641	0.9659	0.9677	0.9694	0.9710	0.9726	0.9740	0.9755
53	0.9395	0.9421	0.9447	0.9472	0.9496	0.9520	0.9543	0.9566	0.9588	0.9609	0.9629	0.9648	0.9667	0.9685	0.9702	0.9718	0.9734
54	0.9344	0.9372	0.9399	0.9426	0.9452	0.9478	0.9503	0.9527	0.9551	0.9574	0.9596	0.9617	0.9637	0.9657	0.9676	0.9693	0.9710
55	0.9289	0.9319	0.9348	0.9376	0.9404	0.9432	0.9459	0.9485	0.9511	0.9536	0.9560	0.9583	0.9605	0.9626	0.9647	0.9666	0.9685
56	0.9230	0.9261	0.9292	0.9323	0.9353	0.9382	0.9411	0.9439	0.9467	0.9494	0.9520	0.9545	0.9569	0.9592	0.9615	0.9636	0.9656
57	0.9167	0.9200	0.9232	0.9264	0.9296	0.9328	0.9359	0.9389	0.9419	0.9448	0.9476	0.9503	0.9530	0.9555	0.9579	0.9603	0.9625
58	0.9100	0.9134	0.9168	0.9202	0.9236	0.9269	0.9302	0.9335	0.9366	0.9398	0.9428	0.9457	0.9486	0.9514	0.9540	0.9566	0.9590
59	0.9027	0.9063	0.9099	0.9134	0.9170	0.9205	0.9241	0.9275	0.9309	0.9343	0.9375	0.9407	0.9438	0.9468	0.9497	0.9525	0.9552
A 60	0.8950	0.8987	0.9024	0.9062	0.9099	0.9137	0.9174	0.9211	0.9247	0.9283	0.9318	0.9352	0.9386	0.9418	0.9450	0.9480	0.9510
g 61	0.8867	0.8906	0.8945	0.8984	0.9023	0.9062	0.9102	0.9141	0.9179	0.9218	0.9255	0.9292	0.9328	0.9363	0.9397	0.9430	0.9462
e 62	0.8779	0.8819	0.8859	0.8900	0.8941	0.8982	0.9024	0.9065	0.9106	0.9146	0.9187	0.9226	0.9265	0.9303	0.9340	0.9375	0.9410
63	0.8685	0.8726	0.8768	0.8810	0.8853	0.8896	0.8939	0.8983	0.9026	0.9069	0.9112	0.9154	0.9195	0.9236	0.9276	0.9315	0.9352
o 64	0.8584	0.8627	0.8670	0.8714	0.8759	0.8804	0.8849	0.8894	0.8940	0.8985	0.9030	0.9075	0.9119	0.9163	0.9206	0.9248	0.9288
f 65	0.8478	0.8522	0.8566	0.8611	0.8658	0.8704	0.8751	0.8799	0.8846	0.8894	0.8942	0.8989	0.9036	0.9083	0.9129	0.9174	0.9218
66	0.8365	0.8410	0.8455	0.8502	0.8550	0.8598	0.8647	0.8696	0.8746	0.8796	0.8846	0.8896	0.8946	0.8996	0.9045	0.9093	0.9140
M 67	0.8245	0.8291	0.8338	0.8386	0.8434	0.8484	0.8535	0.8586	0.8638	0.8690	0.8743	0.8796	0.8848	0.8901	0.8953	0.9004	0.9055
e 68	0.8118	0.8165	0.8213	0.8262	0.8312	0.8363	0.8416	0.8469	0.8522	0.8577	0.8632	0.8687	0.8743	0.8798	0.8853	0.8908	0.8962
m 69	0.7985	0.8032	0.8081	0.8131	0.8182	0.8235	0.8289	0.8343	0.8399	0.8456	0.8513	0.8570	0.8628	0.8687	0.8745	0.8803	0.8860
b 70	0.7844	0.7892	0.7941	0.7992	0.8045	0.8099	0.8154	0.8210	0.8267	0.8326	0.8385	0.8445	0.8506	0.8567	0.8628	0.8689	0.8750
e 71	0.7695	0.7744	0.7795	0.7846	0.7900	0.7955	0.8011	0.8069	0.8128	0.8188	0.8249	0.8311	0.8374	0.8438	0.8502	0.8566	0.8631
r 72	0.7540	0.7589	0.7640	0.7693	0.7747	0.7803	0.7860	0.7919	0.7979	0.8041	0.8104	0.8169	0.8234	0.8300	0.8367	0.8434	0.8502
73	0.7377	0.7426	0.7478	0.7531	0.7586	0.7642	0.7701	0.7761	0.7823	0.7886	0.7951	0.8017	0.8084	0.8153	0.8222	0.8293	0.8363
74	0.7206	0.7256	0.7308	0.7362	0.7417	0.7474	0.7533	0.7594	0.7657	0.7722	0.7788	0.7856	0.7926	0.7996	0.8068	0.8141	0.8215
75	0.7028	0.7079	0.7131	0.7185	0.7240	0.7298	0.7358	0.7420	0.7483	0.7549	0.7617	0.7686	0.7757	0.7830	0.7904	0.7980	0.8056
76	0.6843	0.6894	0.6946	0.7000	0.7056	0.7114	0.7174	0.7237	0.7301	0.7368	0.7436	0.7507	0.7580	0.7654	0.7731	0.7808	0.7888
77	0.6651	0.6701	0.6753	0.6807	0.6864	0.6922	0.6983	0.7045	0.7110	0.7178	0.7247	0.7319	0.7393	0.7469	0.7547	0.7627	0.7709
78	0.6452	0.6502	0.6554	0.6608	0.6664	0.6722	0.6783	0.6846	0.6912	0.6979	0.7050	0.7122	0.7197	0.7275	0.7354	0.7436	0.7520
79	0.6246	0.6296	0.6347	0.6401	0.6457	0.6516	0.6576	0.6639	0.6705	0.6773	0.6844	0.6917	0.6993	0.7071	0.7152	0.7235	0.7321
80	0.6034	0.6084	0.6135	0.6188	0.6244	0.6302	0.6363	0.6426	0.6491	0.6559	0.6630	0.6704	0.6780	0.6859	0.6941	0.7026	0.7112
81	0.5818	0.5866	0.5917	0.5970	0.6025	0.6083	0.6143	0.6205	0.6271	0.6339	0.6410	0.6483	0.6560	0.6640	0.6722	0.6807	0.6895
82	0.5597	0.5645	0.5695	0.5747	0.5802	0.5859	0.5918	0.5980	0.6045	0.6113	0.6184	0.6257	0.6334	0.6414	0.6496	0.6582	0.6671
83	0.5374	0.5421	0.5470	0.5522	0.5575	0.5632	0.5690	0.5752	0.5816	0.5883	0.5953	0.6026	0.6103	0.6182	0.6265	0.6351	0.6441
84	0.5149	0.5195	0.5244	0.5294	0.5347	0.5402	0.5460	0.5521	0.5584	0.5651	0.5720	0.5792	0.5868	0.5947	0.6030	0.6116	0.6205
85	0.4925	0.4970	0.5017	0.5067	0.5119	0.5173	0.5230	0.5289	0.5352	0.5417	0.5485	0.5557	0.5632	0.5711	0.5793	0.5878	0.5967
86	0.4702	0.4746	0.4792	0.4841	0.4891	0.4944	0.5000	0.5058	0.5119	0.5184	0.5251	0.5321	0.5395	0.5473	0.5554	0.5639	0.5728
87	0.4482	0.4525	0.4570	0.4617	0.4667	0.4718	0.4773	0.4830	0.4889	0.4952	0.5018	0.5088	0.5160	0.5237	0.5317	0.5401	0.5488
88	0.4267	0.4309	0.4352	0.4398	0.4446	0.4497	0.4550	0.4605	0.4663	0.4725	0.4789	0.4857	0.4929	0.5004	0.5082	0.5165	0.5251
89	0.4058	0.4098	0.4141	0.4185	0.4232	0.4281	0.4332	0.4386	0.4443	0.4503	0.4566	0.4632	0.4702	0.4775	0.4852	0.4933	0.5019
90	0.3856	0.3895	0.3936	0.3979	0.4024	0.4072	0.4121	0.4174	0.4229	0.4287	0.4348	0.4413	0.4481	0.4553	0.4628	0.4708	0.4791
91	0.3662	0.3700	0.3739	0.3781	0.3825	0.3871	0.3919	0.3970	0.4023	0.4080	0.4139	0.4202	0.4268	0.4338	0.4412	0.4489	0.4571
92	0.3476	0.3513	0.3551	0.3591	0.3633	0.3678	0.3724	0.3773	0.3825	0.3880	0.3938	0.3999	0.4063	0.4131	0.4203	0.4278	0.4358
93	0.3298	0.3334	0.3371	0.3409	0.3450	0.3493	0.3538	0.3585	0.3635	0.3688	0.3744	0.3803	0.3865	0.3931	0.4001	0.4075	0.4153
94	0.3128	0.3162	0.3198	0.3235	0.3274	0.3315	0.3359	0.3405	0.3453	0.3504	0.3558	0.3615	0.3675	0.3739	0.3807	0.3878	0.3954
95	0.2965	0.2997	0.3031	0.3067	0.3105	0.3145	0.3186	0.3230	0.3277	0.3326	0.3378	0.3433	0.3492	0.3553	0.3619	0.3688	0.3762
96	0.2810	0.2842	0.2874	0.2909	0.2945	0.2983	0.3023	0.3066	0.3110	0.3158	0.3208	0.3261	0.3317	0.3377	0.3440	0.3507	0.3579
97	0.2664	0.2694	0.2725	0.2758	0.2793	0.2829	0.2868	0.2909	0.2952	0.2997	0.3046	0.3097	0.3151	0.3209	0.3270	0.3335	0.3403
98	0.2525	0.2554	0.2584	0.2616	0.2649	0.2684	0.2721	0.2760	0.2802	0.2845	0.2892	0.2941	0.2993	0.3049	0.3108	0.3170	0.3237
99	0.2395	0.2423	0.2452	0.2482	0.2514	0.2548	0.2583	0.2621	0.2661	0.2703	0.2747	0.2795	0.2845	0.2898	0.2955	0.3016	0.3080
100	0.2274	0.2301	0.2329	0.2358	0.2388	0.2421	0.2455	0.2491	0.2529	0.2569	0.2612	0.2658	0.2706	0.2758	0.2812	0.2871	0.2933

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Healthy Retiree; Adjusted 104%Male/103%Female; Set Forward 1 year; MP-2021 - Projected to 2040
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Service Retirement

Age	Age of Contingent Annuitant																
	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
1	0.9995	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998
2	0.9995	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998
3	0.9994	0.9995	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998
4	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998
5	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
6	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
7	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997
8	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997
9	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997
10	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997
11	0.9991	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996
12	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9995	0.9996
13	0.9989	0.9990	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
14	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995
15	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9994
16	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994
17	0.9986	0.9987	0.9987	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994
A 18	0.9986	0.9986	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994
g 19	0.9985	0.9986	0.9987	0.9987	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994
e 20	0.9985	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9992	0.9992	0.9992	0.9993	0.9993	0.9994
21	0.9984	0.9985	0.9986	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9994
o 22	0.9983	0.9984	0.9985	0.9986	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993
f 23	0.9982	0.9983	0.9984	0.9985	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9993	0.9993
24	0.9981	0.9982	0.9983	0.9983	0.9984	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992
M 25	0.9979	0.9980	0.9981	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9987	0.9988	0.9989	0.9989	0.9990	0.9991	0.9991	0.9992
e 26	0.9977	0.9979	0.9980	0.9981	0.9982	0.9983	0.9984	0.9985	0.9985	0.9986	0.9987	0.9988	0.9989	0.9989	0.9990	0.9991	0.9991
m 27	0.9976	0.9977	0.9978	0.9979	0.9980	0.9981	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9990
b 28	0.9974	0.9975	0.9976	0.9978	0.9979	0.9980	0.9981	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990
e 29	0.9972	0.9973	0.9975	0.9976	0.9977	0.9979	0.9980	0.9981	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9987	0.9988	0.9989
r 30	0.9969	0.9971	0.9973	0.9974	0.9976	0.9977	0.9978	0.9980	0.9981	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9987	0.9988
31	0.9967	0.9969	0.9971	0.9972	0.9974	0.9975	0.9977	0.9978	0.9979	0.9981	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9987
32	0.9964	0.9966	0.9968	0.9970	0.9972	0.9973	0.9975	0.9977	0.9978	0.9979	0.9980	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987
33	0.9961	0.9963	0.9966	0.9968	0.9970	0.9971	0.9973	0.9975	0.9976	0.9978	0.9979	0.9980	0.9982	0.9983	0.9984	0.9985	0.9986
34	0.9958	0.9960	0.9963	0.9965	0.9967	0.9969	0.9971	0.9973	0.9975	0.9976	0.9978	0.9979	0.9980	0.9982	0.9983	0.9984	0.9985
35	0.9954	0.9957	0.9960	0.9962	0.9964	0.9967	0.9969	0.9971	0.9973	0.9974	0.9976	0.9978	0.9979	0.9980	0.9982	0.9983	0.9984
36	0.9950	0.9953	0.9956	0.9959	0.9961	0.9964	0.9966	0.9968	0.9971	0.9972	0.9974	0.9976	0.9978	0.9979	0.9980	0.9982	0.9983
37	0.9945	0.9949	0.9952	0.9955	0.9958	0.9961	0.9963	0.9966	0.9968	0.9970	0.9972	0.9974	0.9976	0.9978	0.9979	0.9981	0.9982
38	0.9940	0.9944	0.9947	0.9951	0.9954	0.9957	0.9960	0.9963	0.9965	0.9968	0.9970	0.9972	0.9974	0.9976	0.9978	0.9979	0.9981
39	0.9934	0.9938	0.9942	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9965	0.9967	0.9970	0.9972	0.9974	0.9976	0.9978	0.9979
40	0.9928	0.9932	0.9937	0.9941	0.9945	0.9948	0.9952	0.9955	0.9958	0.9961	0.9964	0.9967	0.9969	0.9971	0.9974	0.9976	0.9977
41	0.9921	0.9925	0.9930	0.9935	0.9939	0.9943	0.9947	0.9950	0.9954	0.9957	0.9960	0.9963	0.9966	0.9969	0.9971	0.9973	0.9975
42	0.9912	0.9918	0.9923	0.9928	0.9932	0.9937	0.9941	0.9945	0.9949	0.9953	0.9956	0.9959	0.9962	0.9965	0.9968	0.9970	0.9973
43	0.9903	0.9909	0.9914	0.9920	0.9925	0.9930	0.9934	0.9939	0.9943	0.9947	0.9951	0.9954	0.9958	0.9961	0.9964	0.9967	0.9970
44	0.9892	0.9899	0.9905	0.9911	0.9916	0.9921	0.9927	0.9931	0.9936	0.9941	0.9945	0.9949	0.9953	0.9956	0.9959	0.9963	0.9966
45	0.9880	0.9887	0.9894	0.9900	0.9906	0.9912	0.9918	0.9923	0.9928	0.9933	0.9938	0.9942	0.9946	0.9950	0.9954	0.9958	0.9961
46	0.9867	0.9875	0.9882	0.9889	0.9895	0.9902	0.9908	0.9914	0.9919	0.9925	0.9930	0.9934	0.9939	0.9943	0.9947	0.9951	0.9955
47	0.9852	0.9860	0.9868	0.9876	0.9883	0.9890	0.9897	0.9903	0.9909	0.9915	0.9920	0.9925	0.9930	0.9935	0.9940	0.9944	0.9948
48	0.9835	0.9844	0.9853	0.9861	0.9869	0.9876	0.9884	0.9891	0.9897	0.9903	0.9909	0.9915	0.9921	0.9926	0.9931	0.9935	0.9940
49	0.9816	0.9826	0.9836	0.9845	0.9853	0.9861	0.9869	0.9877	0.9884	0.9891	0.9897	0.9903	0.9909	0.9915	0.9920	0.9925	0.9930
50	0.9802	0.9813	0.9823	0.9833	0.9842	0.9851	0.9859	0.9867	0.9875	0.9883	0.9890	0.9896	0.9903	0.9909	0.9914	0.9920	0.9925
51	0.9786	0.9798	0.9809	0.9819	0.9830	0.9839	0.9848	0.9857	0.9866	0.9874	0.9881	0.9888	0.9895	0.9902	0.9908	0.9914	0.9919
52	0.9768	0.9781	0.9793	0.9805	0.9816	0.9826	0.9836	0.9846	0.9855	0.9864	0.9872	0.9880	0.9887	0.9894	0.9901	0.9907	0.9913
53	0.9748	0.9762	0.9776	0.9789	0.9801	0.9812	0.9823	0.9834	0.9844	0.9853	0.9862	0.9870	0.9879	0.9886	0.9893	0.9900	0.9907
54	0.9727	0.9742	0.9757	0.9771	0.9784	0.9797	0.9809	0.9820	0.9831	0.9841	0.9851	0.9860	0.9869	0.9877	0.9885	0.9892	0.9899
55	0.9703	0.9719	0.9736	0.9751	0.9765	0.9779	0.9792	0.9805	0.9817	0.9828	0.9839	0.9849	0.9858	0.9867	0.9876	0.9884	0.9892
56	0.9676	0.9695	0.9712	0.9729	0.9745	0.9760	0.9775	0.9788	0.9801	0.9814	0.9825	0.9836	0.9847	0.9857	0.9866	0.9875	0.9883
57	0.9646	0.9667	0.9686	0.9705	0.9722	0.9739	0.9755	0.9770	0.9784	0.9798	0.9811	0.9823	0.9834	0.9845	0.9855	0.9864	0.9873
58	0.9614	0.9636	0.9658	0.9678	0.9697	0.9716	0.9733	0.9750	0.9765	0.9780	0.9794	0.9807	0.9820	0.9832	0.9843	0.9853	0.9863
59	0.9578	0.9602	0.9626	0.9648	0.9669	0.9690	0.9709	0.9727	0.9744	0.9761	0.9776	0.9791	0.9804	0.9817	0.9829	0.9841	0.9852
A 60	0.9538	0.9565	0.9590	0.9615	0.9638	0.9661	0.9682	0.9702	0.9721	0.9739	0.9756	0.9772	0.9787	0.9801	0.9815	0.9827	0.9839
g 61	0.9493	0.9523	0.9551	0.9578	0.9604	0.9628	0.9652	0.9674	0.9695	0.9714	0.9733	0.9751	0.9768	0.9783	0.9798	0.9812	0.9825
e 62	0.9444	0.9476	0.9507	0.9537	0.9565	0.9592	0.9618	0.9642	0.9665	0.9687	0.9708	0.9727	0.9746	0.9763	0.9779	0.9794	0.9809
63	0.9389	0.9424	0.9458	0.9490	0.9521	0.9551	0.9579	0.9606	0.9632	0.9656	0.9679	0.9701	0.9721	0.9740	0.9758	0.9775	0.9790
o 64	0.9328	0.9366	0.9403	0.9439	0.9473	0.9505	0.9537	0.9566	0.9594	0.9621	0.9647	0.9670	0.9693	0.9714	0.9734	0.9753	0.9770
f 65	0.9261	0.9302	0.9342	0.9381	0.9419	0.9454	0.9489	0.9521	0.9552	0.9582	0.9610	0.9636	0.9661	0.9685	0.9707	0.9727	0.9747
66	0.9186	0.9231	0.9275	0.9317	0.9358	0.9397	0.9435	0.9471	0.9505	0.9538	0.9569	0.9598	0.9625	0.9651	0.9676	0.9699	0.9720
M 67	0.9104	0.9153	0.9200	0.9246	0.9291	0.9334	0.9375	0.9414	0.9452	0.9488	0.9522	0.9554	0.9585	0.9614	0.9641	0.9666	0.9690
e 68	0.9015	0.9067	0.9118	0.9168	0.9216	0.9263	0.9308	0.9351	0.9392	0.9432	0.9470	0.9506	0.9539	0.9571	0.9601	0.9630	0.9656
m 69	0.8917	0.8973	0.9028	0.9081	0.9134	0.9184	0.9233	0.9281	0.9326	0.9370	0.9411	0.9451	0.9488	0.9523	0.9557	0.9588	0.9617
b 70	0.8810	0.8870	0.8929	0.8986	0.9043	0.9098	0.9151	0.9203	0.9252	0.9300	0.9346	0.9389	0.9430	0.9470	0.9507	0.9541	0.9574
e 71	0.8694	0.8758	0.8821	0.8883	0.8943	0.9002	0.9060	0.9116	0.9170	0.9223	0.9273	0.9320	0.9366	0.9409	0.9450	0.9489	0.9525
r 72	0.8569	0.8636	0.8703	0.8769	0.8834	0.8898	0.8960	0.9021	0.9080	0.9137	0.9191	0.9244	0.9294	0.9342	0.9387	0.9429	0.9470
73	0.8434	0.8505	0.8576	0.8646	0.8715	0.8783	0.8850	0.8916	0.8980	0.9041	0.9101	0.9158	0.9213	0.9266	0.9316	0.9363	0.9407
74	0.8289	0.8363	0.8438	0.8512	0.8586	0.8659	0.8730	0.8801	0.8870	0.8936	0.9001	0.9064	0.9124	0.9182	0.9236	0.9289	0.9338
75	0.8134	0.8211	0.8290	0.8368	0.8446	0.8523	0.8600	0.8675	0.8749	0.8821	0.8891	0.8960	0.9025	0.9088	0.9148	0.9205	0.9260
76	0.7968	0.8049	0.8131	0.8213	0.8295	0.8377	0.8458	0.8538	0.8617	0.8695	0.8771	0.8844	0.8916	0.8984	0.9050	0.9113	0.9173
77	0.7792	0.7876	0.7961	0.8047	0.8133	0.8219	0.8305	0.8390	0.8474	0.8557	0.8639	0.8718	0.8795	0.8870	0.8942	0.9010	0.9076
78	0.7605	0.7692	0.7780	0.7869	0.7959	0.8049	0.8140	0.8230	0.8319	0.8408	0.8495	0.8580	0.8663	0.8744	0.8822	0.8897	0.8968
79	0.7408	0.7498	0.7588	0.7681	0.7774	0.7869	0.7963	0.8058	0.8153	0.8246	0.8339	0.8430	0.8519	0.8606	0.8690	0.8771	0.8849
80	0.7202	0.7293	0.7387	0.7482	0.7578	0.7676	0.7775	0.7874	0.7974	0.8073	0.8171	0.8268	0.8363	0.8456	0.8547	0.8634	0.8719
81	0.6986	0.7079	0.7175	0.7272	0.7372	0.7473	0.7576	0.7679	0.7783	0.7887	0.7990	0.8093	0.8194	0.8293	0.8390	0.8485	0.8576
82	0.6763	0.6857	0.6955	0.7054	0.7156	0.7260	0.7366	0.7473	0.7581	0.7690	0.7798	0.7906	0.8014	0.8119	0.8222	0.8323	0.8421
83	0.6533	0.6629	0.6727	0.6829	0.6933	0.7039	0.7148	0.7258	0.7370	0.7483	0.7596	0.7709	0.7822	0.7933	0.8043	0.8150	0.8255
84	0.6298	0.6394	0.6494	0.6597	0.6702	0.6811	0.6922	0.7035	0.7150	0.7267	0.7385	0.7503	0.7620	0.7738	0.7853	0.7967	0.8078
85	0.6060	0.6156	0.6256	0.6360	0.6467	0.6577	0.6690	0.6805	0.6923	0.7044	0.7165	0.7287	0.7410	0.7532	0.7654	0.7774	0.7891
86	0.5820	0.5916	0.6016	0.6120	0.6228	0.6339	0.6453	0.6571	0.6691	0.6814	0.6939	0.7065	0.7192	0.7319	0.7446	0.7572	0.7695
87	0.5580	0.5676	0.5776	0.5879	0.5987	0.6099	0.6214	0.6333	0.6455	0.6580	0.6708	0.6838	0.6969	0.7100	0.7232	0.7363	0.7492
88	0.5342	0.5437	0.5536	0.5639	0.5747	0.5858	0.5974	0.6094	0.6218	0.6345	0.6474	0.6607	0.6741	0.6877	0.7013	0.7148	0.7283
89	0.5108	0.5202	0.5300	0.5402	0.5509	0.5620	0.5736	0.5856	0.5981	0.6109	0.6240	0.6375	0.6512	0.6651	0.6790	0.6931	0.7070
90	0.4879	0.4971	0.5068	0.5169	0.5275	0.5386	0.5501	0.5621	0.5746	0.5875	0.6008	0.6144	0.6283	0.6425	0.6568	0.6711	0.6855
91	0.4657	0.4748	0.4843	0.4943	0.5048	0.5157	0.5272	0.5391	0.5515	0.5645	0.5778	0.5915	0.6056	0.6200	0.6346	0.6493	0.6640
92	0.4442	0.4531	0.4624	0.4723	0.4826	0.4934	0.5047	0.5166	0.5290	0.5418	0.5552	0.5690	0.5832	0.5977	0.6125	0.6275	0.6426
93	0.4235	0.4321	0.4413	0.4509	0.4610	0.4717	0.4829	0.4946	0.5069	0.5197	0.5330	0.5468	0.5611	0.5757	0.5906	0.6058	0.6212
94	0.4034	0.4119	0.4208	0.4302	0.4401	0.4506	0.4616	0.4732	0.4853	0.4980	0.5113	0.5250	0.5393	0.5540	0.5690	0.5844	0.5999
95	0.3839	0.3922	0.4009	0.4100	0.4197	0.4300	0.4408	0.4522	0.4641	0.4767	0.4898	0.5035	0.5177	0.5324	0.5475	0.5629	0.5786
96	0.3654	0.3734	0.3818	0.3908	0.4003	0.4103	0.4208	0.4320	0.4438	0.4561	0.4691	0.4827	0.4968	0.5114	0.5265	0.5420	0.5578
97	0.3476	0.3554	0.3636	0.3723	0.3815	0.3913	0.4016	0.4125	0.4241	0.4362	0.4490	0.4624	0.4764	0.4910	0.5060	0.5215	0.5374
98	0.3308	0.3383	0.3462	0.3547	0.3636	0.3731	0.3832	0.3939	0.4052	0.4171	0.4297	0.4429	0.4567	0.4711	0.4861	0.5015	0.5174
99	0.3148	0.3221	0.3298	0.3380	0.3467	0.3559	0.3657	0.3761	0.3871	0.3988	0.4112	0.4242	0.4378	0.4521	0.4669	0.4822	0.4981
100	0.2999	0.3069	0.3143	0.3223	0.3307	0.3397	0.3492	0.3594	0.3701	0.3816	0.3936	0.4064	0.4198	0.4339	0.4486	0.4638	0.4795

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Healthy Retiree; Adjusted 104%Male/103%Female; Set Forward 1 year; MP-2021 - Projected to 2040
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Service Retirement

Age of Member	Age of Contingent Annuitant 86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
2	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
3	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
4	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
5	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
6	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
7	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
8	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
9	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
10	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999
11	0.9996	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999
12	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999
13	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998
14	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998
15	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998
16	0.9994	0.9995	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
17	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997
18	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997
19	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997
20	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997
21	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
22	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
23	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
24	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9997
25	0.9992	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997	0.9997
26	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9997	0.9997
27	0.9991	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9997
28	0.9990	0.9991	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996
29	0.9990	0.9990	0.9991	0.9991	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996	0.9996
30	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9996
31	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995
32	0.9987	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9995	0.9995
33	0.9987	0.9987	0.9988	0.9989	0.9990	0.9990	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9994	0.9994	0.9995
34	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9990	0.9991	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994	0.9994
35	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9994	0.9994
36	0.9984	0.9985	0.9986	0.9987	0.9988	0.9989	0.9989	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993	0.9994
37	0.9983	0.9984	0.9985	0.9986	0.9987	0.9988	0.9989	0.9990	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993	0.9993
38	0.9982	0.9983	0.9984	0.9985	0.9986	0.9987	0.9988	0.9989	0.9990	0.9990	0.9991	0.9992	0.9992	0.9993	0.9993
39	0.9981	0.9982	0.9983	0.9985	0.9986	0.9987	0.9988	0.9988	0.9989	0.9990	0.9991	0.9991	0.9992	0.9992	0.9993
40	0.9979	0.9981	0.9982	0.9983	0.9985	0.9986	0.9987	0.9988	0.9989	0.9989	0.9990	0.9991	0.9991	0.9992	0.9992
41	0.9977	0.9979	0.9981	0.9982	0.9983	0.9985	0.9986	0.9987	0.9988	0.9989	0.9989	0.9990	0.9991	0.9991	0.9992
42	0.9975	0.9977	0.9979	0.9980	0.9982	0.9983	0.9985	0.9986	0.9987	0.9988	0.9989	0.9990	0.9990	0.9991	0.9992
43	0.9972	0.9974	0.9976	0.9978	0.9980	0.9982	0.9983	0.9984	0.9986	0.9987	0.9988	0.9989	0.9990	0.9990	0.9991
44	0.9968	0.9971	0.9973	0.9975	0.9977	0.9979	0.9981	0.9983	0.9984	0.9985	0.9986	0.9988	0.9989	0.9989	0.9990
45	0.9964	0.9967	0.9969	0.9972	0.9974	0.9976	0.9978	0.9980	0.9982	0.9983	0.9985	0.9986	0.9987	0.9988	0.9989
46	0.9958	0.9962	0.9965	0.9968	0.9970	0.9973	0.9975	0.9977	0.9979	0.9981	0.9982	0.9984	0.9985	0.9986	0.9987
47	0.9952	0.9955	0.9959	0.9962	0.9965	0.9968	0.9970	0.9972	0.9975	0.9977	0.9979	0.9980	0.9982	0.9983	0.9985
48	0.9944	0.9948	0.9952	0.9955	0.9958	0.9961	0.9964	0.9967	0.9969	0.9971	0.9974	0.9976	0.9977	0.9979	0.9981
49	0.9934	0.9939	0.9943	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9964	0.9967	0.9969	0.9971	0.9973	0.9975
50	0.9930	0.9934	0.9939	0.9943	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9965	0.9967	0.9969	0.9971	0.9973
51	0.9925	0.9930	0.9934	0.9939	0.9943	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9965	0.9967	0.9969	0.9971
52	0.9919	0.9924	0.9929	0.9934	0.9938	0.9943	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9964	0.9967	0.9969
53	0.9913	0.9919	0.9924	0.9929	0.9934	0.9938	0.9942	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9964	0.9967
54	0.9906	0.9912	0.9918	0.9924	0.9929	0.9933	0.9938	0.9942	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962	0.9964
55	0.9899	0.9905	0.9912	0.9918	0.9923	0.9928	0.9933	0.9938	0.9942	0.9946	0.9949	0.9953	0.9956	0.9959	0.9961
56	0.9891	0.9898	0.9905	0.9911	0.9917	0.9923	0.9928	0.9933	0.9937	0.9941	0.9945	0.9949	0.9952	0.9955	0.9958
57	0.9882	0.9890	0.9897	0.9904	0.9910	0.9917	0.9922	0.9927	0.9932	0.9937	0.9941	0.9945	0.9949	0.9952	0.9955
58	0.9872	0.9881	0.9889	0.9896	0.9903	0.9910	0.9916	0.9922	0.9927	0.9932	0.9936	0.9941	0.9945	0.9948	0.9951
59	0.9862	0.9871	0.9880	0.9888	0.9896	0.9903	0.9909	0.9915	0.9921	0.9927	0.9931	0.9936	0.9940	0.9944	0.9948
60	0.9850	0.9860	0.9870	0.9879	0.9887	0.9895	0.9902	0.9909	0.9915	0.9921	0.9926	0.9931	0.9936	0.9940	0.9944
61	0.9837	0.9848	0.9858	0.9868	0.9877	0.9886	0.9894	0.9901	0.9908	0.9914	0.9920	0.9925	0.9930	0.9935	0.9939
62	0.9822	0.9834	0.9846	0.9857	0.9867	0.9876	0.9885	0.9893	0.9900	0.9907	0.9913	0.9919	0.9925	0.9930	0.9934
63	0.9805	0.9819	0.9832	0.9843	0.9854	0.9865	0.9874	0.9883	0.9891	0.9899	0.9906	0.9912	0.9918	0.9923	0.9928
64	0.9786	0.9801	0.9815	0.9828	0.9841	0.9852	0.9862	0.9872	0.9881	0.9889	0.9897	0.9904	0.9911	0.9917	0.9922
65	0.9765	0.9781	0.9797	0.9811	0.9825	0.9837	0.9849	0.9860	0.9870	0.9879	0.9887	0.9895	0.9902	0.9909	0.9915
66	0.9740	0.9759	0.9776	0.9792	0.9807	0.9821	0.9834	0.9845	0.9856	0.9867	0.9876	0.9885	0.9893	0.9900	0.9906
67	0.9712	0.9733	0.9752	0.9770	0.9787	0.9802	0.9816	0.9829	0.9842	0.9853	0.9863	0.9873	0.9881	0.9890	0.9897
68	0.9681	0.9704	0.9725	0.9745	0.9763	0.9780	0.9796	0.9811	0.9824	0.9837	0.9849	0.9859	0.9869	0.9878	0.9886
69	0.9645	0.9670	0.9694	0.9716	0.9737	0.9756	0.9774	0.9790	0.9805	0.9819	0.9832	0.9844	0.9855	0.9864	0.9874
70	0.9604	0.9633	0.9660	0.9684	0.9707	0.9728	0.9748	0.9766	0.9783	0.9799	0.9813	0.9826	0.9838	0.9849	0.9859
71	0.9559	0.9591	0.9620	0.9648	0.9673	0.9697	0.9719	0.9739	0.9758	0.9775	0.9791	0.9806	0.9820	0.9832	0.9843
72	0.9507	0.9543	0.9576	0.9606	0.9635	0.9661	0.9686	0.9708	0.9729	0.9749	0.9767	0.9783	0.9798	0.9812	0.9825
73	0.9449	0.9489	0.9525	0.9559	0.9591	0.9621	0.9648	0.9674	0.9697	0.9719	0.9739	0.9757	0.9774	0.9790	0.9804
74	0.9384	0.9428	0.9468	0.9506	0.9542	0.9575	0.9606	0.9634	0.9660	0.9685	0.9707	0.9728	0.9747	0.9764	0.9780
75	0.9311	0.9359	0.9405	0.9447	0.9486	0.9523	0.9557	0.9589	0.9619	0.9646	0.9671	0.9694	0.9716	0.9735	0.9753
76	0.9229	0.9283	0.9333	0.9380	0.9424	0.9465	0.9503	0.9538	0.9571	0.9602	0.9630	0.9656	0.9680	0.9702	0.9722
77	0.9138	0.9197	0.9252	0.9304	0.9353	0.9399	0.9441	0.9481	0.9518	0.9552	0.9584	0.9613	0.9640	0.9664	0.9687
78	0.9036	0.9101	0.9162	0.9220	0.9274	0.9325	0.9372	0.9416	0.9457	0.9496	0.9531	0.9564	0.9594	0.9622	0.9647
79	0.8924	0.8995	0.9062	0.9125	0.9185	0.9241	0.9294	0.9343	0.9389	0.9432	0.9471	0.9508	0.9542	0.9573	0.9601
80	0.8800	0.8877	0.8951	0.9020	0.9086	0.9148	0.9206	0.9261	0.9312	0.9359	0.9404	0.9445	0.9482	0.9517	0.9549
81	0.8664	0.8748	0.8828	0.8904	0.8976	0.9044	0.9108	0.9169	0.9225	0.9278	0.9327	0.9373	0.9415	0.9454	0.9490
82	0.8516	0.8607	0.8694	0.8777	0.8855	0.8930	0.9000	0.9067	0.9129	0.9188	0.9242	0.9293	0.9340	0.9384	0.9424
83	0.8356	0.8454	0.8548	0.8638	0.8724	0.8805	0.8882	0.8955	0.9024	0.9088	0.9149	0.9205	0.9257	0.9306	0.9350
84	0.8186	0.8291	0.8392	0.8489	0.8581	0.8670	0.8754	0.8833	0.8908	0.8979	0.9046	0.9108	0.9165	0.9219	0.9269
85	0.8006	0.8118	0.8226	0.8329	0.8429	0.8524	0.8615	0.8702	0.8784	0.8861	0.8934	0.9002	0.9065	0.9125	0.9179
86	0.7817	0.7935	0.8050	0.8160	0.8267	0.8369	0.8467	0.8561	0.8649	0.8734	0.8813	0.8887	0.8957	0.9022	0.9082
87	0.7619	0.7744	0.7865	0.7983	0.8096	0.8206	0.8311	0.8411	0.8507	0.8598	0.8684	0.8765	0.8840	0.8911	0.8977
88	0.7416	0.7547	0.7674	0.7798	0.7919	0.8035	0.8147	0.8254	0.8356	0.8454	0.8547	0.8634	0.8717	0.8794	0.8866
89	0.7208	0.7345	0.7478	0.7608	0.7735	0.7858	0.7976	0.8090	0.8200	0.8304	0.8404	0.8498	0.8587	0.8670	0.8748
90	0.6998	0.7140	0.7279	0.7415	0.7548	0.7677	0.7802	0.7922	0.8039	0.8150	0.8256	0.8357	0.8452	0.8542	0.8625
91	0.6787	0.6934	0.7078	0.7219	0.7358	0.7493	0.7624	0.7751	0.7874	0.7992	0.8104	0.8212	0.8313	0.8409	0.8499
92	0.6576	0.6727	0.6876	0.7022	0.7166	0.7307	0.7444	0.7577	0.7706	0.7830	0.7949	0.8063	0.8171	0.8273	0.8369
93	0.6366	0.6520	0.6673	0.6824	0.6973	0.7119	0.7262	0.7401	0.7536	0.7666	0.7791	0.7911	0.8025	0.8134	0.8236
94	0.6156	0.6313	0.6470	0.6625	0.6779	0.6929	0.7077	0.7222	0.7362	0.7499	0.7630	0.7756	0.7876	0.7991	0.8099
95	0.5945	0.6105	0.6265	0.6424	0.6581	0.6736	0.6889	0.7038	0.7184	0.7326	0.7463	0.7595	0.7722	0.7842	0.7956
96	0.5739	0.5901	0.6063	0.6225	0.6386	0.6545	0.6701	0.6856	0.7007	0.7154	0.7297	0.7434	0.7566	0.7692	0.7812
97	0.5535	0.5698	0.5863	0.6027	0.6191	0.6353	0.6514	0.6672	0.6828	0.6980	0.7128	0.7271	0.7409	0.7540	0.7666
98	0.5336	0.5500	0.5666	0.5832	0.5998	0.6164	0.6328	0.6490	0.6650	0.6806	0.6959	0.7107	0.7250	0.7387	0.7517
99	0.5142	0.5307	0.5474	0.5642	0.5810	0.5977	0.6144	0.6310	0.6473	0.6634	0.6791	0.6943	0.7091	0.7233	0.7369
100	0.4957	0.5121	0.5289	0.5457	0.5627	0.5796	0.5966	0.6134	0.6300	0.6465	0.6626	0.6782	0.6935	0.7081	0.7222

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Disabled Retiree; Set Forward 1 year; MP-2021 - Projected to 2021
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Disability Retirement

Age	Age of Contingent Annuitant																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	0.9669	0.9674	0.9680	0.9685	0.9690	0.9695	0.9701	0.9706	0.9712	0.9717	0.9723	0.9728	0.9734	0.9739	0.9745	0.9751	0.9756
2	0.9650	0.9655	0.9660	0.9666	0.9671	0.9677	0.9682	0.9688	0.9693	0.9699	0.9705	0.9710	0.9716	0.9722	0.9728	0.9734	0.9740
3	0.9629	0.9635	0.9640	0.9645	0.9651	0.9657	0.9662	0.9668	0.9674	0.9680	0.9686	0.9692	0.9698	0.9704	0.9710	0.9716	0.9722
4	0.9607	0.9613	0.9618	0.9624	0.9630	0.9636	0.9641	0.9647	0.9653	0.9659	0.9665	0.9672	0.9678	0.9684	0.9690	0.9697	0.9703
5	0.9585	0.9590	0.9596	0.9602	0.9607	0.9613	0.9619	0.9625	0.9632	0.9638	0.9644	0.9650	0.9657	0.9663	0.9670	0.9676	0.9683
6	0.9560	0.9566	0.9572	0.9578	0.9584	0.9590	0.9596	0.9602	0.9609	0.9615	0.9621	0.9628	0.9635	0.9641	0.9648	0.9655	0.9661
7	0.9535	0.9541	0.9547	0.9553	0.9559	0.9565	0.9571	0.9578	0.9584	0.9591	0.9598	0.9604	0.9611	0.9618	0.9625	0.9632	0.9639
8	0.9508	0.9514	0.9520	0.9526	0.9533	0.9539	0.9545	0.9552	0.9559	0.9565	0.9572	0.9579	0.9586	0.9593	0.9600	0.9608	0.9615
9	0.9480	0.9486	0.9492	0.9498	0.9505	0.9511	0.9518	0.9525	0.9532	0.9539	0.9546	0.9553	0.9560	0.9567	0.9575	0.9582	0.9590
10	0.9450	0.9456	0.9463	0.9469	0.9476	0.9482	0.9489	0.9496	0.9503	0.9510	0.9517	0.9525	0.9532	0.9540	0.9547	0.9555	0.9563
11	0.9419	0.9425	0.9432	0.9438	0.9445	0.9452	0.9459	0.9466	0.9473	0.9480	0.9488	0.9495	0.9503	0.9511	0.9518	0.9526	0.9534
12	0.9386	0.9393	0.9399	0.9406	0.9413	0.9420	0.9427	0.9434	0.9441	0.9449	0.9456	0.9464	0.9472	0.9480	0.9488	0.9496	0.9504
13	0.9352	0.9358	0.9365	0.9372	0.9379	0.9386	0.9393	0.9400	0.9408	0.9415	0.9423	0.9431	0.9439	0.9447	0.9456	0.9464	0.9472
14	0.9316	0.9322	0.9329	0.9336	0.9343	0.9350	0.9357	0.9365	0.9373	0.9380	0.9388	0.9397	0.9405	0.9413	0.9422	0.9430	0.9439
15	0.9278	0.9284	0.9291	0.9298	0.9305	0.9313	0.9320	0.9328	0.9336	0.9344	0.9352	0.9360	0.9369	0.9377	0.9386	0.9395	0.9404
16	0.9238	0.9245	0.9252	0.9259	0.9266	0.9274	0.9281	0.9289	0.9297	0.9305	0.9313	0.9322	0.9331	0.9339	0.9348	0.9357	0.9366
17	0.9197	0.9203	0.9210	0.9218	0.9225	0.9233	0.9240	0.9248	0.9256	0.9265	0.9273	0.9282	0.9291	0.9300	0.9309	0.9318	0.9327
A 18	0.9171	0.9177	0.9185	0.9192	0.9199	0.9207	0.9215	0.9223	0.9231	0.9240	0.9248	0.9257	0.9266	0.9275	0.9285	0.9294	0.9304
g 19	0.9144	0.9151	0.9158	0.9165	0.9173	0.9180	0.9188	0.9197	0.9205	0.9214	0.9222	0.9231	0.9241	0.9250	0.9260	0.9269	0.9279
e 20	0.9115	0.9122	0.9129	0.9136	0.9144	0.9152	0.9160	0.9168	0.9177	0.9186	0.9195	0.9204	0.9213	0.9223	0.9232	0.9242	0.9253
21	0.9083	0.9090	0.9098	0.9105	0.9113	0.9121	0.9129	0.9138	0.9146	0.9155	0.9164	0.9174	0.9183	0.9193	0.9203	0.9213	0.9223
o 22	0.9049	0.9056	0.9063	0.9071	0.9079	0.9087	0.9095	0.9104	0.9113	0.9122	0.9131	0.9140	0.9150	0.9160	0.9170	0.9180	0.9191
f 23	0.9011	0.9019	0.9026	0.9034	0.9042	0.9050	0.9058	0.9067	0.9076	0.9085	0.9094	0.9104	0.9114	0.9124	0.9134	0.9145	0.9156
24	0.8971	0.8978	0.8986	0.8994	0.9002	0.9010	0.9018	0.9027	0.9036	0.9045	0.9055	0.9065	0.9075	0.9085	0.9095	0.9106	0.9117
M 25	0.8928	0.8936	0.8943	0.8951	0.8959	0.8968	0.8976	0.8985	0.8994	0.9004	0.9013	0.9023	0.9033	0.9044	0.9054	0.9065	0.9076
e 26	0.8885	0.8892	0.8900	0.8908	0.8916	0.8924	0.8933	0.8942	0.8951	0.8961	0.8970	0.8980	0.8991	0.9001	0.9012	0.9023	0.9035
m 27	0.8840	0.8848	0.8855	0.8863	0.8872	0.8880	0.8889	0.8898	0.8907	0.8917	0.8927	0.8937	0.8947	0.8958	0.8969	0.8980	0.8992
b 28	0.8795	0.8802	0.8810	0.8818	0.8826	0.8835	0.8844	0.8853	0.8862	0.8872	0.8882	0.8892	0.8903	0.8914	0.8925	0.8936	0.8948
e 29	0.8749	0.8756	0.8764	0.8772	0.8781	0.8789	0.8798	0.8807	0.8817	0.8827	0.8837	0.8847	0.8858	0.8869	0.8880	0.8892	0.8904
r 30	0.8702	0.8709	0.8717	0.8725	0.8734	0.8742	0.8751	0.8761	0.8770	0.8780	0.8790	0.8801	0.8812	0.8823	0.8834	0.8846	0.8858
31	0.8654	0.8661	0.8669	0.8678	0.8686	0.8695	0.8704	0.8713	0.8723	0.8733	0.8743	0.8754	0.8765	0.8776	0.8788	0.8800	0.8812
32	0.8605	0.8613	0.8621	0.8629	0.8638	0.8647	0.8656	0.8665	0.8675	0.8685	0.8695	0.8706	0.8717	0.8729	0.8740	0.8752	0.8765
33	0.8556	0.8563	0.8571	0.8580	0.8588	0.8597	0.8607	0.8616	0.8626	0.8636	0.8647	0.8657	0.8668	0.8680	0.8692	0.8704	0.8716
34	0.8505	0.8513	0.8521	0.8529	0.8538	0.8547	0.8556	0.8566	0.8576	0.8586	0.8597	0.8608	0.8619	0.8630	0.8642	0.8655	0.8667
35	0.8453	0.8461	0.8469	0.8478	0.8487	0.8496	0.8505	0.8515	0.8525	0.8535	0.8546	0.8557	0.8568	0.8580	0.8592	0.8604	0.8617
36	0.8401	0.8408	0.8417	0.8425	0.8434	0.8443	0.8452	0.8462	0.8472	0.8483	0.8493	0.8504	0.8516	0.8528	0.8540	0.8552	0.8565
37	0.8346	0.8354	0.8362	0.8371	0.8380	0.8389	0.8398	0.8408	0.8418	0.8429	0.8439	0.8451	0.8462	0.8474	0.8486	0.8499	0.8512
38	0.8290	0.8298	0.8307	0.8315	0.8324	0.8333	0.8343	0.8353	0.8363	0.8373	0.8384	0.8395	0.8407	0.8419	0.8431	0.8444	0.8457
39	0.8233	0.8241	0.8249	0.8258	0.8267	0.8276	0.8285	0.8295	0.8306	0.8316	0.8327	0.8338	0.8350	0.8362	0.8374	0.8387	0.8401
40	0.8174	0.8182	0.8190	0.8198	0.8207	0.8217	0.8226	0.8236	0.8246	0.8257	0.8268	0.8279	0.8291	0.8303	0.8316	0.8329	0.8342
41	0.8112	0.8120	0.8129	0.8137	0.8146	0.8156	0.8165	0.8175	0.8186	0.8196	0.8207	0.8219	0.8231	0.8243	0.8255	0.8268	0.8282
42	0.8049	0.8057	0.8066	0.8074	0.8083	0.8093	0.8102	0.8112	0.8123	0.8133	0.8144	0.8156	0.8168	0.8180	0.8193	0.8206	0.8220
43	0.7984	0.7992	0.8001	0.8009	0.8018	0.8028	0.8037	0.8047	0.8058	0.8069	0.8080	0.8091	0.8103	0.8116	0.8128	0.8142	0.8155
44	0.7917	0.7926	0.7934	0.7943	0.7952	0.7961	0.7971	0.7981	0.7991	0.8002	0.8013	0.8025	0.8037	0.8049	0.8062	0.8075	0.8089
45	0.7849	0.7857	0.7866	0.7874	0.7884	0.7893	0.7903	0.7913	0.7923	0.7934	0.7945	0.7957	0.7969	0.7982	0.7994	0.8008	0.8022
46	0.7780	0.7788	0.7796	0.7805	0.7814	0.7824	0.7833	0.7843	0.7854	0.7865	0.7876	0.7888	0.7900	0.7912	0.7925	0.7939	0.7953
47	0.7710	0.7718	0.7726	0.7735	0.7744	0.7753	0.7763	0.7773	0.7784	0.7795	0.7806	0.7818	0.7830	0.7842	0.7855	0.7869	0.7883
48	0.7639	0.7647	0.7655	0.7664	0.7673	0.7683	0.7692	0.7703	0.7713	0.7724	0.7735	0.7747	0.7759	0.7772	0.7785	0.7799	0.7813
49	0.7568	0.7576	0.7585	0.7593	0.7602	0.7612	0.7622	0.7632	0.7642	0.7653	0.7665	0.7677	0.7689	0.7701	0.7715	0.7728	0.7742
50	0.7498	0.7506	0.7514	0.7523	0.7532	0.7542	0.7551	0.7562	0.7572	0.7583	0.7595	0.7606	0.7619	0.7631	0.7645	0.7658	0.7672
51	0.7427	0.7435	0.7443	0.7452	0.7461	0.7471	0.7480	0.7491	0.7501	0.7512	0.7524	0.7535	0.7548	0.7560	0.7574	0.7587	0.7601
52	0.7355	0.7363	0.7372	0.7380	0.7390	0.7399	0.7409	0.7419	0.7430	0.7441	0.7452	0.7464	0.7476	0.7489	0.7502	0.7516	0.7530
53	0.7283	0.7292	0.7300	0.7309	0.7318	0.7327	0.7337	0.7347	0.7358	0.7369	0.7380	0.7392	0.7404	0.7417	0.7430	0.7444	0.7458
54	0.7211	0.7219	0.7228	0.7236	0.7245	0.7255	0.7265	0.7275	0.7285	0.7296	0.7308	0.7320	0.7332	0.7345	0.7358	0.7372	0.7386
55	0.7139	0.7147	0.7156	0.7164	0.7173	0.7183	0.7192	0.7203	0.7213	0.7224	0.7235	0.7247	0.7260	0.7273	0.7286	0.7300	0.7314
56	0.7067	0.7075	0.7083	0.7092	0.7101	0.7110	0.7120	0.7130	0.7140	0.7151	0.7163	0.7175	0.7187	0.7200	0.7213	0.7227	0.7241
57	0.6994	0.7002	0.7010	0.7018	0.7027	0.7037	0.7046	0.7057	0.7067	0.7078	0.7089	0.7101	0.7114	0.7126	0.7140	0.7154	0.7168
58	0.6919	0.6927	0.6936	0.6944	0.6953	0.6962	0.6972	0.6982	0.6993	0.7004	0.7015	0.7027	0.7039	0.7052	0.7065	0.7079	0.7093
59	0.6844	0.6852	0.6860	0.6868	0.6877	0.6886	0.6896	0.6906	0.6917	0.6928	0.6939	0.6951	0.6963	0.6976	0.6989	0.7003	0.7017
A 60	0.6766	0.6774	0.6782	0.6790	0.6799	0.6808	0.6818	0.6828	0.6838	0.6849	0.6861	0.6872	0.6885	0.6898	0.6911	0.6925	0.6939
g 61	0.6685	0.6693	0.6701	0.6710	0.6718	0.6728	0.6737	0.6747	0.6758	0.6768	0.6780	0.6791	0.6804	0.6816	0.6830	0.6843	0.6858
e 62	0.6601	0.6609	0.6617	0.6626	0.6634	0.6644	0.6653	0.6663	0.6673	0.6684	0.6695	0.6707	0.6719	0.6732	0.6745	0.6759	0.6773
63	0.6514	0.6522	0.6530	0.6538	0.6547	0.6556	0.6565	0.6575	0.6586	0.6596	0.6608	0.6619	0.6631	0.6644	0.6657	0.6671	0.6685
o 64	0.6423	0.6430	0.6438	0.6447	0.6455	0.6464	0.6474	0.6484	0.6494	0.6505	0.6516	0.6527	0.6539	0.6552	0.6565	0.6579	0.6593
f 65	0.6327	0.6335	0.6343	0.6351	0.6359	0.6368	0.6378	0.6388	0.6398	0.6408	0.6419	0.6431	0.6443	0.6455	0.6469	0.6482	0.6496
66	0.6227	0.6234	0.6242	0.6250	0.6259	0.6268	0.6277	0.6287	0.6297	0.6307	0.6318	0.6330	0.6342	0.6354	0.6367	0.6381	0.6395
M 67	0.6121	0.6129	0.6137	0.6145	0.6153	0.6162	0.6171	0.6181	0.6191	0.6201	0.6212	0.6224	0.6235	0.6248	0.6261	0.6274	0.6288
e 68	0.6011	0.6018	0.6026	0.6034	0.6042	0.6051	0.6060	0.6070	0.6079	0.6090	0.6101	0.6112	0.6124	0.6136	0.6149	0.6162	0.6176
m 69	0.5894	0.5902	0.5909	0.5917	0.5926	0.5934	0.5943	0.5953	0.5963	0.5973	0.5984	0.5995	0.6006	0.6019	0.6031	0.6044	0.6058
b 70	0.5773	0.5780	0.5788	0.5796	0.5804	0.5812	0.5821	0.5831	0.5840	0.5851	0.5861	0.5872	0.5884	0.5896	0.5908	0.5921	0.5935
e 71	0.5646	0.5653	0.5661	0.5669	0.5677	0.5685	0.5694	0.5703	0.5713	0.5723	0.5733	0.5744	0.5756	0.5768	0.5780	0.5793	0.5806
r 72	0.5515	0.5522	0.5529	0.5537	0.5545	0.5553	0.5562	0.5571	0.5580	0.5590	0.5600	0.5611	0.5622	0.5634	0.5646	0.5659	0.5672
73	0.5378	0.5385	0.5392	0.5400	0.5408	0.5416	0.5425	0.5434	0.5443	0.5453	0.5463	0.5473	0.5484	0.5496	0.5508	0.5521	0.5534
74	0.5237	0.5244	0.5251	0.5259	0.5267	0.5275	0.5283	0.5292	0.5301	0.5311	0.5321	0.5331	0.5342	0.5353	0.5365	0.5378	0.5391
75	0.5093	0.5100	0.5107	0.5114	0.5121	0.5129	0.5138	0.5146	0.5155	0.5165	0.5175	0.5185	0.5196	0.5207	0.5218	0.5231	0.5243
76	0.4945	0.4951	0.4958	0.4965	0.4973	0.4981	0.4989	0.4997	0.5006	0.5016	0.5025	0.5035	0.5046	0.5057	0.5068	0.5080	0.5093
77	0.4794	0.4800	0.4807	0.4814	0.4822	0.4829	0.4837	0.4846	0.4854	0.4863	0.4873	0.4883	0.4893	0.4904	0.4915	0.4927	0.4939
78	0.4641	0.4647	0.4654	0.4661	0.4668	0.4675	0.4683	0.4691	0.4700	0.4709	0.4718	0.4728	0.4738	0.4748	0.4759	0.4771	0.4783
79	0.4486	0.4492	0.4499	0.4506	0.4513	0.4520	0.4527	0.4535	0.4544	0.4552	0.4561	0.4571	0.4581	0.4591	0.4602	0.4613	0.4625
80	0.4330	0.4336	0.4343	0.4349	0.4356	0.4363	0.4371	0.4378	0.4387	0.4395	0.4404	0.4413	0.4423	0.4433	0.4443	0.4454	0.4466
81	0.4174	0.4180	0.4186	0.4193	0.4199	0.4206	0.4214	0.4221	0.4229	0.4237	0.4246	0.4255	0.4264	0.4274	0.4284	0.4295	0.4306
82	0.4019	0.4024	0.4030	0.4037	0.4043	0.4050	0.4057	0.4064	0.4072	0.4080	0.4088	0.4097	0.4106	0.4116	0.4126	0.4136	0.4147
83	0.3864	0.3870	0.3875	0.3881	0.3888	0.3894	0.3901	0.3908	0.3916	0.3924	0.3932	0.3940	0.3949	0.3958	0.3968	0.3978	0.3989
84	0.3711	0.3716	0.3722	0.3728	0.3734	0.3740	0.3747	0.3754	0.3761	0.3769	0.3776	0.3785	0.3793	0.3802	0.3812	0.3821	0.3832
85	0.3560	0.3565	0.3570	0.3576	0.3582	0.3588	0.3594	0.3601	0.3608	0.3616	0.3623	0.3631	0.3640	0.3648	0.3657	0.3667	0.3677
86	0.3410	0.3415	0.3421	0.3426	0.3432	0.3438	0.3444	0.3451	0.3457	0.3465	0.3472	0.3480	0.3488	0.3496	0.3505	0.3514	0.3524
87	0.3263	0.3268	0.3273	0.3278	0.3284	0.3290	0.3296	0.3302	0.3308	0.3315	0.3323	0.3330	0.3338	0.3346	0.3354	0.3363	0.3373
88	0.3117	0.3122	0.3127	0.3132	0.3137	0.3143	0.3149	0.3155	0.3161	0.3168	0.3175	0.3182	0.3189	0.3197	0.3205	0.3214	0.3223
89	0.2977	0.2981	0.2986	0.2991	0.2996	0.3001	0.3007	0.3013	0.3019	0.3025	0.3032	0.3039	0.3046	0.3054	0.3061	0.3070	0.3078
90	0.2842	0.2846	0.2851	0.2856	0.2861	0.2866	0.2871	0.2877	0.2883	0.2889	0.2895	0.2902	0.2909	0.2916	0.2924	0.2932	0.2940
91	0.2713	0.2718	0.2722	0.2727	0.2731	0.2736	0.2741	0.2747	0.2753	0.2758	0.2765	0.2771	0.2778	0.2785	0.2792	0.2800	0.2808
92	0.2590	0.2594	0.2598	0.2602	0.2607	0.2611	0.2616	0.2622	0.2627	0.2633	0.2639	0.2645	0.2651	0.2658	0.2665	0.2673	0.2680
93	0.2469	0.2473	0.2477	0.2482	0.2486	0.2491	0.2495	0.2500	0.2506	0.2511	0.2517	0.2523	0.2529	0.2535	0.2542	0.2549	0.2557
94	0.2352	0.2356	0.2360	0.2364	0.2368	0.2372	0.2377	0.2382	0.2387	0.2392	0.2397	0.2403	0.2409	0.2415	0.2422	0.2428	0.2436
95	0.2236	0.2240	0.2243	0.2247	0.2251	0.2255	0.2260	0.2264	0.2269	0.2274	0.2279	0.2285	0.2291	0.2297	0.2303	0.2309	0.2316
96	0.2123	0.2127	0.2130	0.2134	0.2138	0.2142	0.2146	0.2150	0.2155	0.2160	0.2165	0.2170	0.2176	0.2181	0.2187	0.2193	0.2200
97	0.2015	0.2018	0.2021	0.2025	0.2028	0.2032	0.2036	0.2041	0.2045	0.2050	0.2054	0.2059	0.2065	0.2070	0.2076	0.2082	0.2088
98	0.1911	0.1914	0.1917	0.1920	0.1924	0.1927	0.1931	0.1935	0.1939	0.1944	0.1948	0.1953	0.1958	0.1963	0.1969	0.1974	0.1980
99	0.1812	0.1815	0.1818	0.1821	0.1825	0.1828	0.1832	0.1836	0.1840	0.1844	0.1848	0.1853	0.1858	0.1863	0.1868	0.1873	0.1879
100	0.1721	0.1723	0.1726	0.1729	0.1733	0.1736	0.1739	0.1743	0.1747	0.1751	0.1755	0.1759	0.1764	0.1769	0.1774	0.1779	0.1784

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Disabled Retiree; Set Forward 1 year; MP-2021 - Projected to 2021
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Disability Retirement

Age	Age of Contingent Annuitant																	
	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	0.9762	0.9768	0.9773	0.9779	0.9785	0.9791	0.9796	0.9802	0.9808	0.9813	0.9819	0.9825	0.9830	0.9836	0.9841	0.9846	0.9852
2	0.9746	0.9751	0.9757	0.9763	0.9769	0.9775	0.9781	0.9787	0.9793	0.9799	0.9805	0.9811	0.9817	0.9822	0.9828	0.9834	0.9839
3	0.9728	0.9734	0.9740	0.9746	0.9753	0.9759	0.9765	0.9771	0.9777	0.9784	0.9790	0.9796	0.9802	0.9808	0.9814	0.9820	0.9826
4	0.9709	0.9716	0.9722	0.9728	0.9735	0.9741	0.9748	0.9754	0.9761	0.9767	0.9774	0.9780	0.9786	0.9793	0.9799	0.9805	0.9811
5	0.9689	0.9696	0.9703	0.9709	0.9716	0.9723	0.9729	0.9736	0.9743	0.9750	0.9756	0.9763	0.9770	0.9776	0.9783	0.9789	0.9796
6	0.9668	0.9675	0.9682	0.9689	0.9696	0.9703	0.9710	0.9717	0.9724	0.9731	0.9738	0.9745	0.9752	0.9759	0.9765	0.9772	0.9779
7	0.9646	0.9653	0.9660	0.9667	0.9675	0.9682	0.9689	0.9696	0.9704	0.9711	0.9718	0.9725	0.9732	0.9740	0.9747	0.9754	0.9761
8	0.9622	0.9630	0.9637	0.9644	0.9652	0.9659	0.9667	0.9674	0.9682	0.9689	0.9697	0.9705	0.9712	0.9720	0.9727	0.9735	0.9742
9	0.9597	0.9605	0.9612	0.9620	0.9628	0.9636	0.9643	0.9651	0.9659	0.9667	0.9675	0.9682	0.9690	0.9698	0.9706	0.9714	0.9721
10	0.9571	0.9578	0.9586	0.9594	0.9602	0.9610	0.9618	0.9626	0.9635	0.9643	0.9651	0.9659	0.9667	0.9675	0.9683	0.9691	0.9700
11	0.9542	0.9550	0.9559	0.9567	0.9575	0.9583	0.9592	0.9600	0.9609	0.9617	0.9625	0.9634	0.9642	0.9651	0.9659	0.9668	0.9676
12	0.9513	0.9521	0.9529	0.9538	0.9546	0.9555	0.9564	0.9572	0.9581	0.9590	0.9598	0.9607	0.9616	0.9625	0.9634	0.9642	0.9651
13	0.9481	0.9490	0.9498	0.9507	0.9516	0.9525	0.9534	0.9543	0.9552	0.9561	0.9570	0.9579	0.9588	0.9597	0.9606	0.9615	0.9625
14	0.9448	0.9457	0.9466	0.9475	0.9484	0.9493	0.9502	0.9511	0.9521	0.9530	0.9540	0.9549	0.9558	0.9568	0.9577	0.9587	0.9596
15	0.9413	0.9422	0.9431	0.9440	0.9450	0.9459	0.9469	0.9478	0.9488	0.9498	0.9507	0.9517	0.9527	0.9537	0.9547	0.9556	0.9566
16	0.9376	0.9385	0.9395	0.9404	0.9414	0.9424	0.9434	0.9443	0.9453	0.9463	0.9474	0.9484	0.9494	0.9504	0.9514	0.9524	0.9534
17	0.9337	0.9347	0.9356	0.9366	0.9376	0.9386	0.9397	0.9407	0.9417	0.9427	0.9438	0.9448	0.9459	0.9469	0.9480	0.9490	0.9501
18	0.9314	0.9323	0.9333	0.9344	0.9354	0.9364	0.9375	0.9385	0.9396	0.9407	0.9417	0.9428	0.9439	0.9450	0.9461	0.9472	0.9483
19	0.9289	0.9299	0.9310	0.9320	0.9331	0.9341	0.9352	0.9363	0.9374	0.9385	0.9396	0.9407	0.9418	0.9430	0.9441	0.9452	0.9464
20	0.9263	0.9273	0.9284	0.9295	0.9305	0.9316	0.9327	0.9339	0.9350	0.9361	0.9373	0.9384	0.9396	0.9408	0.9419	0.9431	0.9443
21	0.9234	0.9244	0.9255	0.9266	0.9277	0.9289	0.9300	0.9312	0.9323	0.9335	0.9347	0.9359	0.9371	0.9383	0.9395	0.9407	0.9419
22	0.9202	0.9213	0.9224	0.9235	0.9247	0.9258	0.9270	0.9282	0.9294	0.9306	0.9318	0.9330	0.9343	0.9355	0.9368	0.9380	0.9393
23	0.9166	0.9178	0.9189	0.9201	0.9212	0.9224	0.9236	0.9248	0.9261	0.9273	0.9286	0.9298	0.9311	0.9324	0.9337	0.9350	0.9363
24	0.9128	0.9140	0.9151	0.9163	0.9175	0.9187	0.9200	0.9212	0.9225	0.9238	0.9251	0.9264	0.9277	0.9290	0.9303	0.9317	0.9330
25	0.9088	0.9099	0.9111	0.9123	0.9136	0.9148	0.9161	0.9174	0.9187	0.9200	0.9213	0.9227	0.9240	0.9254	0.9267	0.9281	0.9295
26	0.9046	0.9058	0.9070	0.9082	0.9095	0.9108	0.9121	0.9134	0.9147	0.9161	0.9175	0.9188	0.9202	0.9216	0.9231	0.9245	0.9259
27	0.9004	0.9016	0.9028	0.9041	0.9053	0.9066	0.9080	0.9093	0.9107	0.9121	0.9135	0.9149	0.9163	0.9178	0.9192	0.9207	0.9222
28	0.8960	0.8972	0.8985	0.8998	0.9011	0.9024	0.9038	0.9052	0.9066	0.9080	0.9094	0.9109	0.9124	0.9138	0.9153	0.9169	0.9184
29	0.8916	0.8928	0.8941	0.8954	0.8967	0.8981	0.8995	0.9009	0.9023	0.9038	0.9053	0.9068	0.9083	0.9098	0.9114	0.9129	0.9145
30	0.8870	0.8883	0.8896	0.8909	0.8923	0.8937	0.8951	0.8965	0.8980	0.8995	0.9010	0.9025	0.9041	0.9057	0.9073	0.9089	0.9105
31	0.8824	0.8837	0.8850	0.8864	0.8878	0.8892	0.8906	0.8921	0.8936	0.8951	0.8967	0.8982	0.8998	0.9014	0.9031	0.9047	0.9064
32	0.8777	0.8790	0.8804	0.8817	0.8831	0.8846	0.8861	0.8875	0.8891	0.8906	0.8922	0.8938	0.8955	0.8971	0.8988	0.9005	0.9022
33	0.8729	0.8743	0.8756	0.8770	0.8784	0.8799	0.8814	0.8829	0.8845	0.8860	0.8877	0.8893	0.8910	0.8927	0.8944	0.8961	0.8979
34	0.8680	0.8694	0.8707	0.8721	0.8736	0.8751	0.8766	0.8781	0.8797	0.8813	0.8830	0.8847	0.8864	0.8881	0.8899	0.8916	0.8935
35	0.8630	0.8644	0.8657	0.8672	0.8686	0.8701	0.8717	0.8733	0.8749	0.8765	0.8782	0.8799	0.8816	0.8834	0.8852	0.8870	0.8889
36	0.8578	0.8592	0.8606	0.8621	0.8635	0.8651	0.8666	0.8682	0.8699	0.8715	0.8733	0.8750	0.8768	0.8786	0.8804	0.8823	0.8842
37	0.8525	0.8539	0.8553	0.8568	0.8583	0.8598	0.8614	0.8631	0.8647	0.8664	0.8682	0.8699	0.8717	0.8736	0.8755	0.8774	0.8793
38	0.8471	0.8485	0.8499	0.8514	0.8529	0.8545	0.8561	0.8577	0.8594	0.8611	0.8629	0.8647	0.8665	0.8684	0.8703	0.8723	0.8743
39	0.8414	0.8428	0.8443	0.8458	0.8473	0.8489	0.8505	0.8522	0.8539	0.8557	0.8575	0.8593	0.8612	0.8631	0.8650	0.8670	0.8690
40	0.8356	0.8370	0.8385	0.8400	0.8415	0.8431	0.8448	0.8465	0.8482	0.8500	0.8518	0.8537	0.8556	0.8575	0.8595	0.8615	0.8636
41	0.8296	0.8310	0.8325	0.8340	0.8356	0.8372	0.8389	0.8406	0.8423	0.8441	0.8460	0.8478	0.8498	0.8518	0.8538	0.8558	0.8580
42	0.8234	0.8248	0.8263	0.8278	0.8294	0.8310	0.8327	0.8344	0.8362	0.8380	0.8399	0.8418	0.8438	0.8458	0.8478	0.8499	0.8521
43	0.8169	0.8184	0.8199	0.8214	0.8230	0.8247	0.8264	0.8281	0.8299	0.8317	0.8336	0.8356	0.8376	0.8396	0.8417	0.8438	0.8460
44	0.8103	0.8118	0.8133	0.8149	0.8165	0.8181	0.8199	0.8216	0.8234	0.8253	0.8272	0.8292	0.8312	0.8332	0.8354	0.8375	0.8397
45	0.8036	0.8051	0.8066	0.8082	0.8098	0.8114	0.8132	0.8149	0.8168	0.8186	0.8206	0.8226	0.8246	0.8267	0.8288	0.8310	0.8333
46	0.7967	0.7982	0.7997	0.8013	0.8029	0.8046	0.8064	0.8081	0.8100	0.8119	0.8138	0.8158	0.8179	0.8200	0.8222	0.8244	0.8267
47	0.7897	0.7912	0.7928	0.7944	0.7960	0.7977	0.7994	0.8012	0.8031	0.8050	0.8070	0.8090	0.8111	0.8132	0.8154	0.8177	0.8200
48	0.7827	0.7842	0.7858	0.7874	0.7890	0.7907	0.7925	0.7943	0.7962	0.7981	0.8001	0.8021	0.8042	0.8064	0.8086	0.8109	0.8132
49	0.7757	0.7772	0.7787	0.7803	0.7820	0.7837	0.7855	0.7873	0.7892	0.7912	0.7932	0.7952	0.7973	0.7995	0.8018	0.8041	0.8064
50	0.7687	0.7702	0.7718	0.7734	0.7751	0.7768	0.7786	0.7804	0.7823	0.7843	0.7863	0.7884	0.7905	0.7927	0.7949	0.7973	0.7997
51	0.7616	0.7631	0.7647	0.7663	0.7680	0.7697	0.7715	0.7734	0.7753	0.7773	0.7793	0.7814	0.7835	0.7858	0.7880	0.7904	0.7928
52	0.7545	0.7560	0.7576	0.7592	0.7609	0.7626	0.7644	0.7663	0.7682	0.7702	0.7723	0.7744	0.7765	0.7788	0.7811	0.7834	0.7859
53	0.7473	0.7488	0.7504	0.7521	0.7537	0.7555	0.7573	0.7592	0.7611	0.7631	0.7652	0.7673	0.7695	0.7717	0.7740	0.7764	0.7789
54	0.7401	0.7416	0.7432	0.7449	0.7466	0.7483	0.7502	0.7520	0.7540	0.7560	0.7580	0.7602	0.7624	0.7647	0.7670	0.7694	0.7719
55	0.7329	0.7344	0.7360	0.7377	0.7394	0.7411	0.7430	0.7449	0.7468	0.7488	0.7509	0.7530	0.7553	0.7575	0.7599	0.7623	0.7648
56	0.7256	0.7272	0.7288	0.7304	0.7321	0.7339	0.7357	0.7376	0.7396	0.7416	0.7437	0.7459	0.7481	0.7504	0.7528	0.7552	0.7577
57	0.7183	0.7198	0.7214	0.7231	0.7248	0.7266	0.7284	0.7303	0.7323	0.7343	0.7364	0.7386	0.7409	0.7432	0.7455	0.7480	0.7505
58	0.7108	0.7124	0.7140	0.7157	0.7174	0.7192	0.7210	0.7229	0.7249	0.7270	0.7291	0.7312	0.7335	0.7358	0.7382	0.7407	0.7432
59	0.7032	0.7048	0.7064	0.7080	0.7098	0.7116	0.7134	0.7153	0.7173	0.7194	0.7215	0.7237	0.7260	0.7283	0.7307	0.7332	0.7357
60	0.6954	0.6969	0.6985	0.7002	0.7019	0.7037	0.7056	0.7075	0.7095	0.7116	0.7137	0.7159	0.7182	0.7205	0.7229	0.7254	0.7280
61	0.6873	0.6888	0.6904	0.6921	0.6938	0.6956	0.6975	0.6994	0.7014	0.7035	0.7056	0.7078	0.7101	0.7125	0.7149	0.7174	0.7200
62	0.6788	0.6804	0.6820	0.6836	0.6854	0.6872	0.6891	0.6910	0.6930	0.6951	0.6972	0.6994	0.7017	0.7041	0.7065	0.7090	0.7116
63	0.6700	0.6716	0.6732	0.6748	0.6766	0.6784	0.6802	0.6822	0.6842	0.6862	0.6884	0.6906	0.6929	0.6953	0.6977	0.7003	0.7029
64	0.6608	0.6623	0.6639	0.6656	0.6673	0.6691	0.6710	0.6729	0.6749	0.6770	0.6792	0.6814	0.6837	0.6861	0.6885	0.6911	0.6937
65	0.6511	0.6526	0.6542	0.6559	0.6576	0.6594	0.6613	0.6632	0.6652	0.6673	0.6695	0.6717	0.6740	0.6764	0.6788	0.6814	0.6840
66	0.6409	0.6425	0.6441	0.6457	0.6474	0.6492	0.6511	0.6530	0.6550	0.6571	0.6593	0.6615	0.6638	0.6662	0.6687	0.6712	0.6738
67	0.6303	0.6318	0.6334	0.6350	0.6367	0.6385	0.6404	0.6423	0.6443	0.6464	0.6485	0.6508	0.6531	0.6555	0.6579	0.6605	0.6631
68	0.6190	0.6205	0.6221	0.6238	0.6255	0.6273	0.6291	0.6310	0.6330	0.6351	0.6372	0.6395	0.6418	0.6441	0.6466	0.6492	0.6518
69	0.6073	0.6088	0.6103	0.6119	0.6136	0.6154	0.6173	0.6192	0.6212	0.6232	0.6254	0.6276	0.6299	0.6323	0.6347	0.6373	0.6399
70	0.5949	0.5964	0.5980	0.5996	0.6013	0.6030	0.6048	0.6067	0.6087	0.6108	0.6129	0.6151	0.6174	0.6198	0.6222	0.6248	0.6274
71	0.5820	0.5835	0.5850	0.5866	0.5883	0.5901	0.5919	0.5938	0.5957	0.5978	0.5999	0.6021	0.6044	0.6067	0.6092	0.6117	0.6143
72	0.5686	0.5701	0.5716	0.5732	0.5748	0.5766	0.5784	0.5802	0.5822	0.5842	0.5863	0.5885	0.5908	0.5931	0.5955	0.5981	0.6007
73	0.5547	0.5562	0.5577	0.5592	0.5609	0.5626	0.5644	0.5662	0.5681	0.5701	0.5722	0.5744	0.5766	0.5790	0.5814	0.5839	0.5865
74	0.5404	0.5418	0.5433	0.5448	0.5465	0.5481	0.5499	0.5517	0.5536	0.5556	0.5577	0.5598	0.5620	0.5643	0.5668	0.5692	0.5718
75	0.5257	0.5271	0.5285	0.5300	0.5316	0.5333	0.5350	0.5368	0.5387	0.5406	0.5427	0.5448	0.5470	0.5493	0.5517	0.5541	0.5567
76	0.5106	0.5119	0.5134	0.5149	0.5164	0.5180	0.5197	0.5215	0.5234	0.5253	0.5273	0.5294	0.5316	0.5338	0.5362	0.5386	0.5412
77	0.4952	0.4965	0.4979	0.4994	0.5009	0.5025	0.5042	0.5059	0.5077	0.5096	0.5116	0.5137	0.5158	0.5181	0.5204	0.5228	0.5253
78	0.4795	0.4808	0.4822	0.4836	0.4851	0.4867	0.4884	0.4901	0.4919	0.4937	0.4957	0.4977	0.4998	0.5020	0.5043	0.5067	0.5091
79	0.4637	0.4650	0.4663	0.4677	0.4692	0.4707	0.4723	0.4740	0.4758	0.4776	0.4795	0.4815	0.4836	0.4857	0.4880	0.4903	0.4928
80	0.4478	0.4490	0.4503	0.4517	0.4531	0.4546	0.4562	0.4579	0.4596	0.4614	0.4632	0.4652	0.4672	0.4693	0.4715	0.4738	0.4762
81	0.4318	0.4330	0.4343	0.4356	0.4370	0.4385	0.4400	0.4416	0.4433	0.4451	0.4469	0.4488	0.4508	0.4529	0.4550	0.4573	0.4596
82	0.4158	0.4170	0.4183	0.4196	0.4209	0.4224	0.4239	0.4254	0.4271	0.4288	0.4305	0.4324	0.4343	0.4364	0.4385	0.4407	0.4430
83	0.4000	0.4011	0.4023	0.4036	0.4049	0.4063	0.4078	0.4093	0.4109	0.4125	0.4143	0.4161	0.4180	0.4200	0.4220	0.4242	0.4264
84	0.3842	0.3854	0.3865	0.3878	0.3891	0.3904	0.3918	0.3933	0.3948	0.3965	0.3981	0.3999	0.4018	0.4037	0.4057	0.4078	0.4100
85	0.3687	0.3698	0.3709	0.3721	0.3734	0.3747	0.3761	0.3775	0.3790	0.3806	0.3822	0.3839	0.3857	0.3876	0.3896	0.3916	0.3937
86	0.3534	0.3544	0.3555	0.3567	0.3579	0.3592	0.3605	0.3619	0.3633	0.3649	0.3664	0.3681	0.3699	0.3717	0.3736	0.3756	0.3777
87	0.3382	0.3392	0.3403	0.3414	0.3426	0.3438	0.3451	0.3464	0.3479	0.3493	0.3509	0.3525	0.3542	0.3559	0.3578	0.3597	0.3617
88	0.3232	0.3242	0.3252	0.3263	0.3274	0.3286	0.3299	0.3312	0.3325	0.3339	0.3354	0.3370	0.3386	0.3403	0.3421	0.3440	0.3459
89	0.3087	0.3097	0.3107	0.3117	0.3128	0.3139	0.3151	0.3164	0.3177	0.3191	0.3205	0.3220	0.3236	0.3252	0.3270	0.3288	0.3307
90	0.2949	0.2958	0.2967	0.2977	0.2988	0.2999	0.3010	0.3023	0.3035	0.3048	0.3062	0.3077	0.3092	0.3108	0.3125	0.3142	0.3160
91	0.2816	0.2825	0.2834	0.2844	0.2854	0.2864	0.2876	0.2887	0.2899	0.2912	0.2925	0.2939	0.2954	0.2969	0.2985	0.3002	0.3020
92	0.2688	0.2697	0.2706	0.2715	0.2725	0.2735	0.2745	0.2757	0.2768	0.2781	0.2793	0.2807	0.2821	0.2836	0.2851	0.2868	0.2885
93	0.2564	0.2572	0.2581	0.2590	0.2599	0.2609	0.2619	0.2630	0.2641	0.2653	0.2665	0.2678	0.2692	0.2706	0.2721	0.2737	0.2753
94	0.2443	0.2451	0.2459	0.2467	0.2476	0.2486	0.2496	0.2506	0.2517	0.2528	0.2540	0.2552	0.2566	0.2579	0.2594	0.2609	0.2624
95	0.2323	0.2331	0.2338	0.2347	0.2355	0.2364	0.2374	0.2384	0.2394	0.2405	0.2416	0.2428	0.2441	0.2454	0.2467	0.2482	0.2497
96	0.2207	0.2214	0.2221	0.2229	0.2237	0.2246	0.2255	0.2264	0.2274	0.2285	0.2296	0.2307	0.2319	0.2332	0.2345	0.2359	0.2373
97	0.2094	0.2101	0.2108	0.2116	0.2124	0.2132	0.2140	0.2149	0.2159	0.2169	0.2179	0.2190	0.2202	0.2214	0.2226	0.2240	0.2253
98	0.1987	0.1993	0.2000	0.2007	0.2014	0.2022	0.2031	0.2039	0.2048	0.2058	0.2068	0.2078	0.2089	0.2101	0.2113	0.2125	0.2139
99	0.1885	0.1891	0.1897	0.1904	0.1911	0.1919	0.1927	0.1935	0.1944	0.1953	0.1962	0.1972	0.1983	0.1994	0.2005	0.2017	0.2030
100	0.1790	0.1796	0.1802	0.1808	0.1815	0.1822	0.1830	0.1838	0.1846	0.1855	0.1864	0.1873	0.1883	0.1894	0.1905	0.1916	0.1928

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Disabled Retiree; Set Forward 1 year; MP-2021 - Projected to 2021
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Disability Retirement

	Age of Contingent Annuitant	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
	1	0.9857	0.9862	0.9867	0.9872	0.9877	0.9882	0.9887	0.9892	0.9896	0.9901	0.9905	0.9909	0.9914	0.9918	0.9922	0.9926	0.9930
	2	0.9845	0.9850	0.9856	0.9861	0.9866	0.9871	0.9876	0.9881	0.9886	0.9891	0.9896	0.9900	0.9905	0.9909	0.9914	0.9918	0.9922
	3	0.9832	0.9837	0.9843	0.9849	0.9854	0.9860	0.9865	0.9870	0.9875	0.9880	0.9885	0.9890	0.9895	0.9900	0.9905	0.9909	0.9914
	4	0.9817	0.9823	0.9829	0.9835	0.9841	0.9847	0.9853	0.9858	0.9864	0.9869	0.9874	0.9880	0.9885	0.9890	0.9895	0.9899	0.9904
	5	0.9802	0.9809	0.9815	0.9821	0.9827	0.9833	0.9839	0.9845	0.9851	0.9857	0.9862	0.9868	0.9873	0.9879	0.9884	0.9889	0.9894
	6	0.9786	0.9792	0.9799	0.9806	0.9812	0.9818	0.9825	0.9831	0.9837	0.9843	0.9849	0.9855	0.9861	0.9866	0.9872	0.9877	0.9883
	7	0.9768	0.9775	0.9782	0.9789	0.9796	0.9803	0.9809	0.9816	0.9822	0.9829	0.9835	0.9841	0.9847	0.9853	0.9859	0.9865	0.9871
	8	0.9749	0.9757	0.9764	0.9771	0.9778	0.9785	0.9792	0.9799	0.9806	0.9813	0.9819	0.9826	0.9832	0.9839	0.9845	0.9851	0.9857
	9	0.9729	0.9737	0.9744	0.9752	0.9760	0.9767	0.9774	0.9782	0.9789	0.9796	0.9803	0.9810	0.9816	0.9823	0.9830	0.9836	0.9843
	10	0.9708	0.9716	0.9724	0.9731	0.9739	0.9747	0.9755	0.9762	0.9770	0.9777	0.9785	0.9792	0.9799	0.9806	0.9813	0.9820	0.9827
	11	0.9685	0.9693	0.9701	0.9709	0.9718	0.9726	0.9734	0.9742	0.9750	0.9758	0.9765	0.9773	0.9781	0.9788	0.9795	0.9803	0.9810
	12	0.9660	0.9669	0.9677	0.9686	0.9695	0.9703	0.9712	0.9720	0.9728	0.9736	0.9745	0.9753	0.9761	0.9768	0.9776	0.9784	0.9791
	13	0.9634	0.9643	0.9652	0.9661	0.9670	0.9679	0.9688	0.9696	0.9705	0.9714	0.9722	0.9731	0.9739	0.9747	0.9755	0.9764	0.9771
	14	0.9606	0.9615	0.9625	0.9634	0.9643	0.9653	0.9662	0.9671	0.9680	0.9689	0.9698	0.9707	0.9716	0.9724	0.9733	0.9742	0.9750
	15	0.9576	0.9586	0.9596	0.9605	0.9615	0.9625	0.9634	0.9644	0.9654	0.9663	0.9672	0.9682	0.9691	0.9700	0.9709	0.9718	0.9727
	16	0.9545	0.9555	0.9565	0.9575	0.9585	0.9595	0.9605	0.9615	0.9625	0.9635	0.9645	0.9655	0.9664	0.9674	0.9683	0.9693	0.9702
	17	0.9511	0.9522	0.9533	0.9543	0.9554	0.9564	0.9575	0.9585	0.9595	0.9605	0.9616	0.9626	0.9636	0.9646	0.9656	0.9666	0.9675
A	18	0.9494	0.9505	0.9516	0.9526	0.9537	0.9548	0.9559	0.9570	0.9581	0.9591	0.9602	0.9612	0.9623	0.9633	0.9644	0.9654	0.9664
g	19	0.9475	0.9486	0.9498	0.9509	0.9520	0.9532	0.9543	0.9554	0.9565	0.9576	0.9588	0.9599	0.9610	0.9620	0.9631	0.9642	0.9653
e	20	0.9454	0.9466	0.9478	0.9490	0.9502	0.9513	0.9525	0.9537	0.9548	0.9560	0.9571	0.9583	0.9594	0.9606	0.9617	0.9628	0.9639
	21	0.9431	0.9444	0.9456	0.9468	0.9480	0.9492	0.9504	0.9517	0.9529	0.9541	0.9553	0.9565	0.9577	0.9588	0.9600	0.9612	0.9624
o	22	0.9405	0.9418	0.9431	0.9443	0.9456	0.9468	0.9481	0.9494	0.9506	0.9519	0.9531	0.9544	0.9556	0.9568	0.9581	0.9593	0.9605
f	23	0.9376	0.9389	0.9402	0.9415	0.9428	0.9441	0.9455	0.9468	0.9481	0.9494	0.9507	0.9519	0.9532	0.9545	0.9558	0.9571	0.9584
	24	0.9344	0.9357	0.9371	0.9384	0.9398	0.9411	0.9425	0.9439	0.9452	0.9466	0.9479	0.9492	0.9506	0.9519	0.9533	0.9546	0.9559
M	25	0.9309	0.9323	0.9337	0.9351	0.9365	0.9379	0.9393	0.9407	0.9421	0.9435	0.9449	0.9463	0.9477	0.9491	0.9505	0.9519	0.9533
e	26	0.9274	0.9288	0.9302	0.9317	0.9332	0.9346	0.9361	0.9375	0.9390	0.9404	0.9419	0.9433	0.9448	0.9462	0.9477	0.9491	0.9506
m	27	0.9237	0.9252	0.9267	0.9282	0.9297	0.9312	0.9327	0.9342	0.9357	0.9372	0.9387	0.9402	0.9417	0.9432	0.9447	0.9462	0.9477
b	28	0.9199	0.9215	0.9230	0.9246	0.9261	0.9277	0.9292	0.9308	0.9324	0.9339	0.9355	0.9370	0.9386	0.9402	0.9417	0.9433	0.9448
e	29	0.9161	0.9177	0.9193	0.9209	0.9225	0.9241	0.9257	0.9273	0.9289	0.9305	0.9321	0.9338	0.9354	0.9370	0.9386	0.9402	0.9419
r	30	0.9121	0.9138	0.9154	0.9171	0.9187	0.9204	0.9221	0.9237	0.9254	0.9271	0.9287	0.9304	0.9321	0.9338	0.9354	0.9371	0.9388
	31	0.9081	0.9098	0.9115	0.9132	0.9149	0.9166	0.9183	0.9201	0.9218	0.9235	0.9252	0.9270	0.9287	0.9304	0.9322	0.9339	0.9357
	32	0.9039	0.9057	0.9074	0.9092	0.9109	0.9127	0.9145	0.9163	0.9181	0.9198	0.9216	0.9234	0.9252	0.9270	0.9288	0.9306	0.9325
	33	0.8997	0.9014	0.9032	0.9051	0.9069	0.9087	0.9106	0.9124	0.9142	0.9161	0.9179	0.9198	0.9217	0.9235	0.9254	0.9273	0.9292
	34	0.8953	0.8971	0.8990	0.9008	0.9027	0.9046	0.9065	0.9084	0.9103	0.9122	0.9141	0.9161	0.9180	0.9199	0.9219	0.9238	0.9257
	35	0.8908	0.8927	0.8946	0.8965	0.8984	0.9004	0.9023	0.9043	0.9063	0.9082	0.9102	0.9122	0.9142	0.9162	0.9182	0.9202	0.9222
	36	0.8861	0.8880	0.8900	0.8920	0.8940	0.8960	0.8980	0.9000	0.9021	0.9041	0.9061	0.9082	0.9102	0.9123	0.9144	0.9165	0.9186
	37	0.8813	0.8833	0.8853	0.8873	0.8894	0.8914	0.8935	0.8956	0.8977	0.8998	0.9019	0.9040	0.9062	0.9083	0.9104	0.9126	0.9148
	38	0.8763	0.8783	0.8804	0.8825	0.8846	0.8867	0.8888	0.8910	0.8932	0.8953	0.8975	0.8997	0.9019	0.9041	0.9063	0.9085	0.9108
	39	0.8711	0.8732	0.8753	0.8774	0.8796	0.8818	0.8840	0.8862	0.8884	0.8906	0.8929	0.8951	0.8974	0.8997	0.9020	0.9043	0.9066
	40	0.8657	0.8678	0.8700	0.8722	0.8744	0.8766	0.8789	0.8812	0.8835	0.8858	0.8881	0.8904	0.8928	0.8951	0.8975	0.8999	0.9023
	41	0.8601	0.8623	0.8645	0.8667	0.8690	0.8713	0.8736	0.8759	0.8783	0.8807	0.8830	0.8854	0.8879	0.8903	0.8928	0.8952	0.8977
	42	0.8543	0.8565	0.8587	0.8610	0.8634	0.8657	0.8681	0.8705	0.8729	0.8753	0.8778	0.8803	0.8828	0.8853	0.8878	0.8904	0.8929
	43	0.8482	0.8505	0.8528	0.8551	0.8575	0.8599	0.8623	0.8648	0.8673	0.8698	0.8723	0.8748	0.8774	0.8800	0.8826	0.8853	0.8879
	44	0.8420	0.8443	0.8466	0.8490	0.8514	0.8539	0.8564	0.8589	0.8615	0.8640	0.8666	0.8692	0.8719	0.8746	0.8773	0.8800	0.8827
	45	0.8356	0.8379	0.8403	0.8427	0.8452	0.8477	0.8503	0.8528	0.8554	0.8581	0.8607	0.8634	0.8661	0.8689	0.8717	0.8745	0.8773
	46	0.8290	0.8314	0.8338	0.8363	0.8388	0.8414	0.8440	0.8466	0.8493	0.8520	0.8547	0.8574	0.8602	0.8631	0.8659	0.8688	0.8717
	47	0.8223	0.8248	0.8272	0.8297	0.8323	0.8349	0.8376	0.8402	0.8430	0.8457	0.8485	0.8513	0.8542	0.8571	0.8601	0.8630	0.8660
	48	0.8156	0.8180	0.8205	0.8231	0.8257	0.8284	0.8311	0.8338	0.8366	0.8394	0.8422	0.8451	0.8481	0.8511	0.8541	0.8572	0.8603
	49	0.8088	0.8113	0.8139	0.8164	0.8191	0.8218	0.8245	0.8273	0.8302	0.8330	0.8359	0.8389	0.8419	0.8450	0.8481	0.8512	0.8544
	50	0.8021	0.8046	0.8072	0.8098	0.8125	0.8152	0.8180	0.8209	0.8238	0.8267	0.8297	0.8327	0.8358	0.8389	0.8421	0.8453	0.8486
	51	0.7953	0.7978	0.8004	0.8031	0.8058	0.8086	0.8114	0.8143	0.8172	0.8202	0.8232	0.8263	0.8295	0.8327	0.8360	0.8393	0.8427
	52	0.7884	0.7909	0.7936	0.7963	0.7990	0.8018	0.8047	0.8076	0.8106	0.8136	0.8167	0.8199	0.8231	0.8264	0.8298	0.8332	0.8366
	53	0.7814	0.7840	0.7867	0.7894	0.7922	0.7950	0.7979	0.8009	0.8039	0.8070	0.8102	0.8134	0.8167	0.8200	0.8234	0.8269	0.8305
	54	0.7744	0.7770	0.7797	0.7825	0.7853	0.7882	0.7911	0.7941	0.7972	0.8003	0.8035	0.8068	0.8101	0.8136	0.8171	0.8206	0.8243
	55	0.7674	0.7700	0.7727	0.7755	0.7783	0.7813	0.7843	0.7873	0.7904	0.7936	0.7968	0.8002	0.8036	0.8071	0.8106	0.8143	0.8180
	56	0.7603	0.7630	0.7657	0.7685	0.7714	0.7743	0.7773	0.7804	0.7836	0.7868	0.7901	0.7935	0.7969	0.8005	0.8041	0.8078	0.8116
	57	0.7531	0.7558	0.7586	0.7614	0.7643	0.7673	0.7703	0.7734	0.7766	0.7799	0.7832	0.7866	0.7902	0.7938	0.7975	0.8013	0.8051
	58	0.7458	0.7485	0.7513	0.7542	0.7571	0.7601	0.7632	0.7663	0.7695	0.7728	0.7762	0.7797	0.7833	0.7869	0.7907	0.7946	0.7985
	59	0.7384	0.7411	0.7439	0.7468	0.7497	0.7527	0.7558	0.7590	0.7623	0.7656	0.7690	0.7725	0.7761	0.7799	0.7837	0.7876	0.7916
A	60	0.7307	0.7334	0.7362	0.7391	0.7421	0.7451	0.7483	0.7515	0.7547	0.7581	0.7615	0.7651	0.7688	0.7726	0.7764	0.7804	0.7845
g	61	0.7227	0.7254	0.7282	0.7311	0.7341	0.7372	0.7404	0.7436	0.7469	0.7503	0.7538	0.7574	0.7611	0.7649	0.7688	0.7729	0.7770
e	62	0.7143	0.7171	0.7199	0.7228	0.7258	0.7289	0.7321	0.7354	0.7387	0.7421	0.7456	0.7492	0.7530	0.7569	0.7608	0.7649	0.7692
	63	0.7056	0.7083	0.7112	0.7141	0.7172	0.7203	0.7235	0.7267	0.7301	0.7335	0.7371	0.7407	0.7445	0.7484	0.7524	0.7566	0.7609
o	64	0.6964	0.6992	0.7020	0.7050	0.7080	0.7111	0.7144	0.7176	0.7210	0.7245	0.7280	0.7317	0.7355	0.7395	0.7435	0.7477	0.7521
f	65	0.6867	0.6895	0.6924	0.6954	0.6984	0.7015	0.7048	0.7081	0.7115	0.7149	0.7185	0.7222	0.7261	0.7300	0.7341	0.7384	0.7428
	66	0.6765	0.6793	0.6822	0.6852	0.6883	0.6914	0.6946	0.6980	0.7014	0.7048	0.7084	0.7122	0.7160	0.7200	0.7242	0.7284	0.7329
M	67	0.6658	0.6686	0.6715	0.6745	0.6776	0.6807	0.6840	0.6873	0.6907	0.6942	0.6978	0.7015	0.7054	0.7094	0.7136	0.7179	0.7224
e	68	0.6545	0.6573	0.6602	0.6632	0.6663	0.6694	0.6727	0.6760	0.6794	0.6829	0.6865	0.6903	0.6942	0.6982	0.7024	0.7067	0.7112
m	69	0.6426	0.6454	0.6483	0.6513	0.6544	0.6575	0.6608	0.6641	0.6675	0.6710	0.6746	0.6784	0.6823	0.6863	0.6905	0.6949	0.6994
b	70	0.6301	0.6329	0.6358	0.6388	0.6419	0.6450	0.6483	0.6516	0.6550	0.6585	0.6621	0.6659	0.6698	0.6738	0.6780	0.6824	0.6869
e	71	0.6170	0.6198	0.6227	0.6257	0.6287	0.6319	0.6351	0.6385	0.6419	0.6454	0.6490	0.6527	0.6566	0.6607	0.6649	0.6693	0.6738
r	72	0.6034	0.6062	0.6090	0.6120	0.6151	0.6182	0.6214	0.6247	0.6281	0.6316	0.6352	0.6389	0.6428	0.6469	0.6511	0.6555	0.6600
	73	0.5892	0.5920	0.5948	0.5978	0.6008	0.6039	0.6072	0.6105	0.6138	0.6173	0.6209	0.6246	0.6285	0.6325	0.6367	0.6411	0.6456
	74	0.5745	0.5772	0.5801	0.5830	0.5861	0.5892	0.5924	0.5957	0.5990	0.6025	0.6060	0.6097	0.6136	0.6176	0.6218	0.6261	0.6306
	75	0.5593	0.5621	0.5649	0.5678	0.5708	0.5739	0.5771	0.5804	0.5837	0.5871	0.5906	0.5943	0.5981	0.6021	0.6063	0.6106	0.6151
	76	0.5438	0.5465	0.5493	0.5522	0.5552	0.5583	0.5614	0.5646	0.5679	0.5713	0.5748	0.5785	0.5823	0.5862	0.5903	0.5946	0.5991
	77	0.5279	0.5306	0.5334	0.5362	0.5392	0.5422	0.5453	0.5485	0.5518	0.5552	0.5586	0.5622	0.5660	0.5699	0.5740	0.5782	0.5827
	78	0.5117	0.5144	0.5171	0.5199	0.5229	0.5259	0.5290	0.5321	0.5354	0.5387	0.5421	0.5456	0.5493	0.5532	0.5573	0.5615	0.5659
	79	0.4953	0.4979	0.5006	0.5034	0.5063	0.5093	0.5123	0.5154	0.5186	0.5219	0.5252	0.5288	0.5324	0.5362	0.5402	0.5444	0.5488
	80	0.4787	0.4813	0.4840	0.4867	0.4896	0.4925	0.4955	0.4986	0.5017	0.5049	0.5082	0.5117	0.5153	0.5191	0.5230	0.5271	0.5314
	81	0.4621	0.4646	0.4672	0.4699	0.4727	0.4756	0.4786	0.4816	0.4847	0.4879	0.4911	0.4945	0.4980	0.5017	0.5056	0.5097	0.5139
	82	0.4454	0.4479	0.4505	0.4531	0.4559	0.4587	0.4616	0.4646	0.4676	0.4707	0.4739	0.4772	0.4807	0.4844	0.4882	0.4922	0.4963
	83	0.4288	0.4312	0.4338	0.4364	0.4391	0.4419	0.4447	0.4476	0.4506	0.4536	0.4567	0.4600	0.4634	0.4670	0.4707	0.4746	0.4787
	84	0.4123	0.4147	0.4172	0.4197	0.4224	0.4251	0.4279	0.4308	0.4337	0.4366	0.4397	0.4429	0.4462	0.4497	0.4533	0.4572	0.4612
	85	0.3960	0.3983	0.4007	0.4032	0.4058	0.4085	0.4112	0.4140	0.4169	0.4198	0.4227	0.4258	0.4291	0.4325	0.4361	0.4398	0.4437
	86	0.3798	0.3821	0.3844	0.3869	0.3894	0.3920	0.3947	0.3974	0.4002	0.4031	0.4059	0.4090	0.4121	0.4155	0.4190	0.4226	0.4264
	87	0.3638	0.3660	0.3683	0.3707	0.3732	0.3757	0.3783	0.3810	0.3837	0.3865	0.3893	0.3922	0.3953	0.3986	0.4020	0.4055	0.4092
	88	0.3480	0.3501	0.3523	0.3547	0.3571	0.3595	0.3621	0.3647	0.3673	0.3700	0.3727	0.3756	0.3786	0.3817	0.3850	0.3885	0.3921
	89	0.3326	0.3347	0.3369	0.3391	0.3415	0.3439	0.3463	0.3489	0.3514	0.3540	0.3567	0.3594	0.3623	0.3654	0.3686	0.3720	0.3755
	90	0.3179	0.3200	0.3220	0.3242	0.3265	0.3288	0.3312	0.3337	0.3362	0.3387	0.3412	0.3439	0.3468	0.3497	0.3528	0.3561	0.3595
	91	0.3039	0.3058	0.3078	0.3099	0.3121	0.3144	0.3167	0.3191	0.3215	0.3240	0.3264	0.3290	0.3318	0.3346	0.3377	0.3408	0.3441
	92	0.2903	0.2921	0.2941	0.2961	0.2983	0.3005	0.3027	0.3050	0.3074	0.3097	0.3121	0.3146	0.3173	0.3201	0.3230	0.3260	0.3293
	93	0.2770	0.2789	0.2807	0.2827	0.2848	0.2869	0.2891	0.2914	0.2936	0.2959	0.2982	0.3006	0.3032	0.3059	0.3087	0.3117	0.3148
	94	0.2641	0.2658	0.2677	0.2696	0.2716	0.2736	0.2758	0.2779	0.2801	0.2823	0.2845	0.2869	0.2893	0.2919	0.2947	0.2975	0.3005
	95	0.2513	0.2530	0.2547	0.2566	0.2585	0.2605	0.2625	0.2646	0.2667	0.2689	0.2710	0.2732	0.2756	0.2781	0.2807	0.2835	0.2864
	96	0.2388	0.2404	0.2421	0.2439	0.2457	0.2477	0.2496	0.2517	0.2537	0.2557	0.2578	0.2600	0.2622	0.2646	0.2672	0.2698	0.2726
	97	0.2268	0.2283	0.2300	0.2316	0.2334	0.2353	0.2372	0.2391	0.2411	0.2431	0.2450	0.2471	0.2493	0.2516	0.2540	0.2565	0.2592
	98	0.2153	0.2167	0.2183	0.2199	0.2216	0.2234	0.2252	0.2271	0.2290	0.2309	0.2327	0.2347	0.2368	0.2390	0.2413	0.2438	0.2463
	99	0.2043	0.2057	0.2072	0.2087	0.2104	0.2121	0.2138	0.2156	0.2175	0.2193	0.2211	0.2230	0.2250	0.2271	0.2293	0.2317	0.2341
	100	0.1941	0.1955	0.1969	0.1984	0.1999	0.2015	0.2032	0.2050	0.2067	0.2085	0.2102	0.2120	0.2139	0.2160	0.2181	0.2204	0.2227

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Disabled Retiree; Set Forward 1 year; MP-2021 - Projected to 2021
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Disability Retirement

Age	Age of Contingent Annuitant																	
	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
1	0.9934	0.9937	0.9941	0.9944	0.9948	0.9951	0.9954	0.9957	0.9960	0.9963	0.9966	0.9969	0.9971	0.9974	0.9976	0.9978	0.9980
2	0.9926	0.9930	0.9934	0.9938	0.9941	0.9945	0.9948	0.9952	0.9955	0.9958	0.9961	0.9964	0.9967	0.9970	0.9972	0.9975	0.9977
3	0.9918	0.9922	0.9926	0.9930	0.9934	0.9938	0.9942	0.9946	0.9949	0.9953	0.9956	0.9959	0.9962	0.9965	0.9968	0.9971	0.9973
4	0.9909	0.9913	0.9918	0.9922	0.9926	0.9931	0.9935	0.9939	0.9942	0.9946	0.9950	0.9953	0.9957	0.9960	0.9963	0.9966	0.9969
5	0.9899	0.9904	0.9909	0.9913	0.9918	0.9922	0.9926	0.9931	0.9935	0.9939	0.9943	0.9946	0.9950	0.9954	0.9957	0.9960	0.9964
6	0.9888	0.9893	0.9898	0.9903	0.9908	0.9913	0.9917	0.9922	0.9926	0.9931	0.9935	0.9939	0.9943	0.9947	0.9951	0.9954	0.9958
7	0.9876	0.9882	0.9887	0.9892	0.9898	0.9903	0.9908	0.9912	0.9917	0.9922	0.9926	0.9931	0.9935	0.9939	0.9943	0.9947	0.9951
8	0.9863	0.9869	0.9875	0.9880	0.9886	0.9891	0.9897	0.9902	0.9907	0.9912	0.9917	0.9921	0.9926	0.9931	0.9935	0.9939	0.9943
9	0.9849	0.9855	0.9861	0.9867	0.9873	0.9879	0.9885	0.9890	0.9896	0.9901	0.9906	0.9911	0.9916	0.9921	0.9926	0.9930	0.9935
10	0.9834	0.9840	0.9847	0.9853	0.9859	0.9865	0.9871	0.9877	0.9883	0.9889	0.9894	0.9900	0.9905	0.9910	0.9915	0.9920	0.9925
11	0.9817	0.9824	0.9831	0.9838	0.9844	0.9851	0.9857	0.9863	0.9869	0.9875	0.9881	0.9887	0.9893	0.9898	0.9904	0.9909	0.9914
12	0.9799	0.9806	0.9814	0.9821	0.9828	0.9834	0.9841	0.9848	0.9854	0.9861	0.9867	0.9873	0.9879	0.9885	0.9891	0.9896	0.9902
13	0.9779	0.9787	0.9795	0.9802	0.9810	0.9817	0.9824	0.9831	0.9838	0.9845	0.9851	0.9858	0.9864	0.9871	0.9877	0.9883	0.9889
14	0.9758	0.9766	0.9774	0.9782	0.9790	0.9798	0.9805	0.9813	0.9820	0.9827	0.9834	0.9841	0.9848	0.9855	0.9861	0.9867	0.9874
15	0.9735	0.9744	0.9753	0.9761	0.9769	0.9777	0.9785	0.9793	0.9801	0.9808	0.9816	0.9823	0.9830	0.9837	0.9844	0.9851	0.9857
16	0.9711	0.9720	0.9729	0.9738	0.9746	0.9755	0.9763	0.9772	0.9780	0.9788	0.9796	0.9803	0.9811	0.9818	0.9826	0.9833	0.9840
17	0.9685	0.9694	0.9704	0.9713	0.9722	0.9731	0.9740	0.9749	0.9757	0.9766	0.9774	0.9782	0.9790	0.9798	0.9805	0.9813	0.9820
A 18	0.9674	0.9684	0.9694	0.9704	0.9714	0.9723	0.9732	0.9741	0.9750	0.9759	0.9768	0.9776	0.9785	0.9793	0.9801	0.9809	0.9817
g 19	0.9663	0.9674	0.9684	0.9694	0.9704	0.9714	0.9724	0.9734	0.9743	0.9753	0.9762	0.9771	0.9779	0.9788	0.9797	0.9805	0.9813
e 20	0.9650	0.9661	0.9672	0.9683	0.9694	0.9704	0.9714	0.9724	0.9734	0.9744	0.9754	0.9763	0.9773	0.9782	0.9791	0.9799	0.9808
21	0.9635	0.9647	0.9658	0.9669	0.9681	0.9692	0.9702	0.9713	0.9724	0.9734	0.9744	0.9754	0.9764	0.9774	0.9783	0.9792	0.9801
o 22	0.9617	0.9629	0.9641	0.9653	0.9665	0.9676	0.9688	0.9699	0.9710	0.9721	0.9732	0.9742	0.9753	0.9763	0.9773	0.9782	0.9792
f 23	0.9596	0.9609	0.9622	0.9634	0.9646	0.9658	0.9670	0.9682	0.9694	0.9705	0.9717	0.9728	0.9739	0.9749	0.9760	0.9770	0.9780
24	0.9573	0.9586	0.9599	0.9612	0.9625	0.9637	0.9650	0.9662	0.9675	0.9687	0.9699	0.9710	0.9722	0.9733	0.9744	0.9755	0.9766
M 25	0.9547	0.9561	0.9574	0.9588	0.9601	0.9615	0.9628	0.9641	0.9654	0.9666	0.9679	0.9691	0.9703	0.9715	0.9727	0.9739	0.9750
e 26	0.9520	0.9534	0.9549	0.9563	0.9577	0.9591	0.9605	0.9618	0.9632	0.9645	0.9658	0.9671	0.9684	0.9697	0.9709	0.9721	0.9733
m 27	0.9492	0.9507	0.9522	0.9537	0.9552	0.9566	0.9581	0.9595	0.9609	0.9623	0.9637	0.9651	0.9664	0.9678	0.9691	0.9703	0.9716
b 28	0.9464	0.9480	0.9495	0.9511	0.9526	0.9541	0.9556	0.9571	0.9586	0.9601	0.9615	0.9630	0.9644	0.9658	0.9671	0.9685	0.9698
e 29	0.9435	0.9451	0.9467	0.9483	0.9499	0.9515	0.9531	0.9547	0.9562	0.9578	0.9593	0.9608	0.9623	0.9637	0.9652	0.9666	0.9680
r 30	0.9405	0.9422	0.9439	0.9455	0.9472	0.9488	0.9505	0.9521	0.9538	0.9554	0.9570	0.9586	0.9601	0.9616	0.9632	0.9647	0.9661
31	0.9374	0.9392	0.9409	0.9427	0.9444	0.9461	0.9478	0.9495	0.9512	0.9529	0.9546	0.9563	0.9579	0.9595	0.9611	0.9627	0.9642
32	0.9343	0.9361	0.9379	0.9397	0.9415	0.9433	0.9451	0.9469	0.9486	0.9504	0.9522	0.9539	0.9556	0.9573	0.9590	0.9606	0.9622
33	0.9310	0.9329	0.9348	0.9367	0.9385	0.9404	0.9423	0.9441	0.9460	0.9478	0.9496	0.9514	0.9532	0.9550	0.9568	0.9585	0.9602
34	0.9277	0.9296	0.9316	0.9335	0.9355	0.9374	0.9394	0.9413	0.9432	0.9451	0.9470	0.9489	0.9508	0.9526	0.9545	0.9563	0.9581
35	0.9242	0.9263	0.9283	0.9303	0.9323	0.9343	0.9364	0.9384	0.9404	0.9424	0.9443	0.9463	0.9483	0.9502	0.9521	0.9540	0.9559
36	0.9207	0.9227	0.9248	0.9269	0.9290	0.9311	0.9332	0.9353	0.9374	0.9395	0.9415	0.9436	0.9456	0.9476	0.9496	0.9516	0.9536
37	0.9169	0.9191	0.9213	0.9234	0.9256	0.9278	0.9299	0.9321	0.9343	0.9364	0.9386	0.9407	0.9428	0.9449	0.9470	0.9491	0.9511
38	0.9130	0.9153	0.9175	0.9198	0.9220	0.9243	0.9265	0.9288	0.9310	0.9333	0.9355	0.9377	0.9399	0.9421	0.9443	0.9465	0.9486
39	0.9090	0.9113	0.9136	0.9159	0.9183	0.9206	0.9229	0.9253	0.9276	0.9299	0.9322	0.9345	0.9368	0.9391	0.9414	0.9437	0.9459
40	0.9047	0.9071	0.9095	0.9119	0.9143	0.9167	0.9192	0.9216	0.9240	0.9264	0.9288	0.9312	0.9336	0.9360	0.9383	0.9407	0.9430
41	0.9002	0.9027	0.9052	0.9077	0.9102	0.9127	0.9152	0.9177	0.9202	0.9227	0.9252	0.9277	0.9302	0.9326	0.9351	0.9375	0.9400
42	0.8955	0.8981	0.9006	0.9032	0.9058	0.9084	0.9110	0.9136	0.9162	0.9188	0.9214	0.9240	0.9265	0.9291	0.9317	0.9342	0.9367
43	0.8906	0.8932	0.8959	0.8986	0.9013	0.9040	0.9066	0.9093	0.9120	0.9147	0.9174	0.9201	0.9227	0.9254	0.9280	0.9307	0.9333
44	0.8854	0.8882	0.8910	0.8937	0.8965	0.8993	0.9021	0.9049	0.9076	0.9104	0.9132	0.9160	0.9187	0.9215	0.9243	0.9270	0.9297
45	0.8801	0.8830	0.8858	0.8887	0.8916	0.8945	0.8973	0.9002	0.9031	0.9060	0.9089	0.9117	0.9146	0.9175	0.9203	0.9231	0.9260
46	0.8747	0.8776	0.8806	0.8835	0.8865	0.8895	0.8925	0.8954	0.8984	0.9014	0.9044	0.9074	0.9103	0.9133	0.9162	0.9192	0.9221
47	0.8691	0.8721	0.8752	0.8782	0.8813	0.8844	0.8875	0.8905	0.8936	0.8967	0.8998	0.9029	0.9060	0.9090	0.9121	0.9151	0.9182
48	0.8634	0.8665	0.8697	0.8728	0.8760	0.8792	0.8824	0.8856	0.8888	0.8920	0.8952	0.8984	0.9016	0.9047	0.9079	0.9110	0.9142
49	0.8576	0.8609	0.8641	0.8674	0.8707	0.8740	0.8773	0.8806	0.8839	0.8872	0.8905	0.8938	0.8971	0.9004	0.9037	0.9070	0.9102
50	0.8519	0.8552	0.8586	0.8620	0.8654	0.8688	0.8722	0.8756	0.8791	0.8825	0.8859	0.8893	0.8928	0.8962	0.8996	0.9029	0.9063
51	0.8461	0.8495	0.8530	0.8564	0.8599	0.8635	0.8670	0.8705	0.8741	0.8777	0.8812	0.8848	0.8883	0.8918	0.8953	0.8988	0.9023
52	0.8401	0.8436	0.8472	0.8508	0.8544	0.8581	0.8617	0.8654	0.8691	0.8727	0.8764	0.8801	0.8838	0.8874	0.8911	0.8947	0.8983
53	0.8340	0.8377	0.8413	0.8451	0.8488	0.8526	0.8563	0.8601	0.8639	0.8677	0.8716	0.8754	0.8792	0.8830	0.8867	0.8905	0.8942
54	0.8279	0.8317	0.8354	0.8393	0.8431	0.8470	0.8509	0.8548	0.8588	0.8627	0.8667	0.8706	0.8746	0.8785	0.8824	0.8863	0.8902
55	0.8217	0.8256	0.8295	0.8334	0.8373	0.8414	0.8454	0.8494	0.8535	0.8576	0.8617	0.8658	0.8699	0.8740	0.8781	0.8821	0.8861
56	0.8155	0.8194	0.8234	0.8274	0.8315	0.8356	0.8398	0.8440	0.8482	0.8525	0.8567	0.8609	0.8652	0.8694	0.8737	0.8779	0.8820
57	0.8091	0.8131	0.8172	0.8213	0.8255	0.8298	0.8341	0.8384	0.8428	0.8472	0.8516	0.8560	0.8604	0.8648	0.8692	0.8736	0.8779
58	0.8025	0.8066	0.8108	0.8151	0.8194	0.8238	0.8282	0.8327	0.8372	0.8417	0.8463	0.8509	0.8554	0.8600	0.8646	0.8691	0.8736
59	0.7958	0.8000	0.8042	0.8086	0.8130	0.8175	0.8221	0.8267	0.8314	0.8361	0.8408	0.8455	0.8503	0.8550	0.8598	0.8645	0.8692
A 60	0.7887	0.7930	0.7974	0.8018	0.8064	0.8110	0.8157	0.8204	0.8252	0.8301	0.8350	0.8399	0.8448	0.8498	0.8547	0.8596	0.8645
g 61	0.7813	0.7857	0.7901	0.7947	0.7994	0.8041	0.8089	0.8138	0.8188	0.8238	0.8288	0.8339	0.8390	0.8442	0.8493	0.8544	0.8595
e 62	0.7735	0.7779	0.7825	0.7872	0.7919	0.7968	0.8017	0.8067	0.8118	0.8170	0.8222	0.8275	0.8328	0.8381	0.8435	0.8488	0.8541
63	0.7653	0.7698	0.7744	0.7792	0.7840	0.7890	0.7941	0.7992	0.8045	0.8098	0.8152	0.8206	0.8261	0.8316	0.8372	0.8427	0.8483
o 64	0.7565	0.7611	0.7658	0.7707	0.7756	0.7807	0.7859	0.7912	0.7965	0.8020	0.8076	0.8132	0.8189	0.8246	0.8304	0.8361	0.8419
f 65	0.7473	0.7519	0.7567	0.7616	0.7667	0.7718	0.7771	0.7825	0.7881	0.7937	0.7994	0.8052	0.8111	0.8170	0.8230	0.8290	0.8350
66	0.7374	0.7421	0.7470	0.7520	0.7571	0.7624	0.7678	0.7733	0.7789	0.7847	0.7906	0.7965	0.8026	0.8087	0.8149	0.8211	0.8274
M 67	0.7270	0.7317	0.7366	0.7417	0.7469	0.7522	0.7577	0.7634	0.7691	0.7750	0.7811	0.7872	0.7934	0.7998	0.8061	0.8126	0.8191
e 68	0.7159	0.7206	0.7256	0.7307	0.7360	0.7414	0.7470	0.7527	0.7586	0.7647	0.7708	0.7771	0.7835	0.7900	0.7966	0.8033	0.8100
m 69	0.7041	0.7089	0.7139	0.7191	0.7244	0.7299	0.7356	0.7414	0.7474	0.7535	0.7598	0.7663	0.7729	0.7795	0.7864	0.7932	0.8002
b 70	0.6916	0.6965	0.7015	0.7067	0.7121	0.7176	0.7234	0.7293	0.7354	0.7416	0.7481	0.7547	0.7614	0.7683	0.7753	0.7824	0.7896
e 71	0.6785	0.6834	0.6884	0.6937	0.6991	0.7047	0.7105	0.7165	0.7226	0.7290	0.7355	0.7423	0.7491	0.7562	0.7633	0.7706	0.7781
r 72	0.6647	0.6696	0.6747	0.6799	0.6854	0.6910	0.6969	0.7029	0.7092	0.7156	0.7222	0.7291	0.7361	0.7433	0.7506	0.7581	0.7657
73	0.6503	0.6552	0.6603	0.6656	0.6710	0.6767	0.6826	0.6887	0.6950	0.7015	0.7082	0.7151	0.7223	0.7296	0.7371	0.7448	0.7526
74	0.6353	0.6402	0.6453	0.6506	0.6561	0.6617	0.6677	0.6738	0.6801	0.6867	0.6935	0.7005	0.7077	0.7152	0.7228	0.7307	0.7387
75	0.6198	0.6247	0.6297	0.6350	0.6405	0.6462	0.6521	0.6583	0.6646	0.6712	0.6781	0.6852	0.6925	0.7001	0.7078	0.7158	0.7240
76	0.6038	0.6086	0.6137	0.6189	0.6244	0.6301	0.6360	0.6422	0.6486	0.6552	0.6621	0.6692	0.6766	0.6843	0.6921	0.7002	0.7086
77	0.5873	0.5921	0.5971	0.6024	0.6078	0.6135	0.6194	0.6255	0.6319	0.6386	0.6455	0.6527	0.6601	0.6678	0.6758	0.6840	0.6925
78	0.5705	0.5752	0.5802	0.5854	0.5908	0.5965	0.6023	0.6085	0.6149	0.6215	0.6284	0.6356	0.6431	0.6509	0.6589	0.6672	0.6758
79	0.5533	0.5580	0.5630	0.5681	0.5735	0.5791	0.5849	0.5910	0.5974	0.6040	0.6109	0.6181	0.6256	0.6334	0.6415	0.6498	0.6585
80	0.5359	0.5406	0.5454	0.5505	0.5558	0.5614	0.5672	0.5732	0.5796	0.5862	0.5931	0.6002	0.6077	0.6155	0.6236	0.6320	0.6407
81	0.5183	0.5229	0.5277	0.5328	0.5380	0.5435	0.5492	0.5552	0.5615	0.5681	0.5749	0.5821	0.5895	0.5973	0.6054	0.6138	0.6226
82	0.5007	0.5052	0.5099	0.5149	0.5201	0.5255	0.5311	0.5371	0.5433	0.5498	0.5566	0.5637	0.5711	0.5789	0.5869	0.5954	0.6041
83	0.4830	0.4874	0.4921	0.4970	0.5021	0.5074	0.5130	0.5188	0.5250	0.5314	0.5381	0.5452	0.5525	0.5602	0.5683	0.5767	0.5854
84	0.4653	0.4697	0.4743	0.4791	0.4841	0.4893	0.4948	0.5006	0.5066	0.5130	0.5196	0.5266	0.5339	0.5415	0.5495	0.5579	0.5666
85	0.4478	0.4521	0.4566	0.4613	0.4662	0.4713	0.4767	0.4824	0.4883	0.4946	0.5011	0.5080	0.5152	0.5228	0.5307	0.5390	0.5476
86	0.4304	0.4346	0.4390	0.4436	0.4484	0.4534	0.4587	0.4643	0.4701	0.4762	0.4827	0.4894	0.4965	0.5040	0.5118	0.5200	0.5286
87	0.4131	0.4172	0.4215	0.4260	0.4307	0.4356	0.4408	0.4462	0.4519	0.4579	0.4642	0.4709	0.4779	0.4852	0.4929	0.5010	0.5095
88	0.3959	0.3999	0.4040	0.4084	0.4130	0.4178	0.4228	0.4281	0.4337	0.4396	0.4458	0.4523	0.4592	0.4664	0.4740	0.4819	0.4903
89	0.3792	0.3830	0.3871	0.3913	0.3958	0.4005	0.4054	0.4106	0.4160	0.4217	0.4278	0.4342	0.4409	0.4480	0.4554	0.4633	0.4715
90	0.3631	0.3668	0.3708	0.3749	0.3792	0.3838	0.3886	0.3936	0.3989	0.4045	0.4104	0.4167	0.4232	0.4301	0.4375	0.4451	0.4533
91	0.3476	0.3513	0.3551	0.3591	0.3633	0.3677	0.3724	0.3773	0.3824	0.3879	0.3937	0.3997	0.4061	0.4129	0.4201	0.4276	0.4356
92	0.3326	0.3362	0.3399	0.3438	0.3478	0.3521	0.3567	0.3614	0.3665	0.3718	0.3774	0.3833	0.3895	0.3961	0.4031	0.4105	0.4183
93	0.3180	0.3214	0.3250	0.3288	0.3328	0.3369	0.3413	0.3459	0.3508	0.3560	0.3614	0.3672	0.3733	0.3797	0.3865	0.3937	0.4013
94	0.3037	0.3070	0.3104	0.3141	0.3179	0.3220	0.3262	0.3307	0.3354	0.3404	0.3457	0.3513	0.3572	0.3635	0.3701	0.3771	0.3845
95	0.2894	0.2926	0.2960	0.2995	0.3032	0.3071	0.3112	0.3155	0.3201	0.3249	0.3300	0.3354	0.3412	0.3472	0.3537	0.3605	0.3677
96	0.2755	0.2786	0.2818	0.2852	0.2888	0.2925	0.2965	0.3006	0.3051	0.3097	0.3147	0.3199	0.3255	0.3313	0.3376	0.3442	0.3512
97	0.2620	0.2650	0.2681	0.2713	0.2748	0.2784	0.2822	0.2862	0.2905	0.2950	0.2997	0.3048	0.3101	0.3158	0.3219	0.3283	0.3351
98	0.2490	0.2519	0.2549	0.2580	0.2613	0.2648	0.2684	0.2723	0.2764	0.2807	0.2853	0.2902	0.2954	0.3008	0.3067	0.3129	0.3195
99	0.2367	0.2394	0.2423	0.2453	0.2485	0.2518	0.2553	0.2591	0.2630	0.2672	0.2716	0.2763	0.2813	0.2866	0.2922	0.2982	0.3045
100	0.2252	0.2278	0.2306	0.2334	0.2365	0.2397	0.2431	0.2467	0.2504	0.2544	0.2587	0.2632	0.2680	0.2731	0.2786	0.2843	0.2905

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Disabled Retiree; Set Forward 1 year; MP-2021 - Projected to 2021
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Disability Retirement

Age	Age of Contingent Annuitant																
	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
1	0.9982	0.9984	0.9986	0.9987	0.9989	0.9990	0.9991	0.9992	0.9993	0.9994	0.9995	0.9995	0.9996	0.9996	0.9997	0.9997	0.9997
2	0.9979	0.9981	0.9983	0.9985	0.9987	0.9988	0.9990	0.9991	0.9992	0.9993	0.9994	0.9995	0.9995	0.9996	0.9997	0.9997	0.9997
3	0.9976	0.9978	0.9980	0.9982	0.9984	0.9986	0.9988	0.9989	0.9991	0.9992	0.9993	0.9994	0.9995	0.9995	0.9996	0.9997	0.9997
4	0.9971	0.9974	0.9977	0.9979	0.9981	0.9983	0.9985	0.9987	0.9988	0.9990	0.9991	0.9992	0.9993	0.9994	0.9995	0.9996	0.9996
5	0.9967	0.9970	0.9972	0.9975	0.9977	0.9980	0.9982	0.9984	0.9986	0.9988	0.9989	0.9991	0.9992	0.9993	0.9994	0.9995	0.9996
6	0.9961	0.9964	0.9967	0.9970	0.9973	0.9976	0.9978	0.9980	0.9983	0.9985	0.9987	0.9988	0.9990	0.9991	0.9992	0.9994	0.9994
7	0.9955	0.9958	0.9961	0.9965	0.9968	0.9971	0.9974	0.9976	0.9979	0.9981	0.9983	0.9985	0.9987	0.9989	0.9990	0.9992	0.9993
8	0.9947	0.9951	0.9955	0.9958	0.9962	0.9965	0.9968	0.9971	0.9974	0.9977	0.9979	0.9982	0.9984	0.9986	0.9988	0.9989	0.9991
9	0.9939	0.9943	0.9947	0.9951	0.9955	0.9958	0.9962	0.9965	0.9968	0.9971	0.9974	0.9977	0.9980	0.9982	0.9984	0.9986	0.9988
10	0.9930	0.9934	0.9938	0.9943	0.9947	0.9951	0.9955	0.9958	0.9962	0.9965	0.9968	0.9971	0.9974	0.9977	0.9980	0.9982	0.9984
11	0.9919	0.9924	0.9929	0.9933	0.9938	0.9942	0.9946	0.9950	0.9954	0.9958	0.9961	0.9965	0.9968	0.9971	0.9974	0.9977	0.9979
12	0.9907	0.9913	0.9918	0.9923	0.9927	0.9932	0.9937	0.9941	0.9945	0.9949	0.9953	0.9957	0.9961	0.9964	0.9967	0.9970	0.9973
13	0.9894	0.9900	0.9905	0.9911	0.9916	0.9921	0.9926	0.9930	0.9935	0.9939	0.9944	0.9948	0.9952	0.9955	0.9959	0.9963	0.9966
14	0.9880	0.9886	0.9891	0.9897	0.9903	0.9908	0.9913	0.9918	0.9923	0.9928	0.9932	0.9937	0.9941	0.9945	0.9949	0.9953	0.9957
15	0.9864	0.9870	0.9876	0.9882	0.9888	0.9894	0.9899	0.9905	0.9910	0.9915	0.9920	0.9925	0.9929	0.9934	0.9938	0.9942	0.9946
16	0.9846	0.9853	0.9859	0.9866	0.9872	0.9878	0.9884	0.9889	0.9895	0.9900	0.9905	0.9910	0.9915	0.9920	0.9925	0.9929	0.9933
17	0.9827	0.9834	0.9841	0.9848	0.9854	0.9861	0.9867	0.9873	0.9878	0.9884	0.9889	0.9895	0.9900	0.9905	0.9909	0.9914	0.9918
A 18	0.9824	0.9831	0.9839	0.9846	0.9852	0.9859	0.9865	0.9872	0.9878	0.9883	0.9889	0.9895	0.9900	0.9905	0.9910	0.9914	0.9919
g 19	0.9821	0.9829	0.9836	0.9843	0.9851	0.9858	0.9864	0.9871	0.9877	0.9883	0.9889	0.9895	0.9900	0.9906	0.9911	0.9916	0.9920
e 20	0.9816	0.9825	0.9832	0.9840	0.9848	0.9855	0.9862	0.9869	0.9876	0.9882	0.9889	0.9895	0.9900	0.9906	0.9911	0.9916	0.9921
21	0.9810	0.9819	0.9827	0.9835	0.9843	0.9851	0.9859	0.9866	0.9873	0.9880	0.9886	0.9893	0.9899	0.9905	0.9910	0.9916	0.9921
o 22	0.9801	0.9810	0.9819	0.9828	0.9837	0.9845	0.9853	0.9861	0.9868	0.9875	0.9882	0.9889	0.9896	0.9902	0.9908	0.9914	0.9919
f 23	0.9790	0.9800	0.9809	0.9818	0.9827	0.9836	0.9844	0.9853	0.9861	0.9868	0.9876	0.9883	0.9890	0.9897	0.9903	0.9909	0.9915
24	0.9776	0.9787	0.9797	0.9806	0.9816	0.9825	0.9834	0.9843	0.9851	0.9859	0.9867	0.9875	0.9882	0.9889	0.9896	0.9903	0.9909
M 25	0.9761	0.9772	0.9782	0.9792	0.9802	0.9812	0.9822	0.9831	0.9840	0.9849	0.9857	0.9865	0.9873	0.9881	0.9888	0.9895	0.9901
e 26	0.9745	0.9756	0.9767	0.9778	0.9789	0.9799	0.9809	0.9819	0.9828	0.9838	0.9847	0.9855	0.9864	0.9872	0.9879	0.9887	0.9894
m 27	0.9728	0.9740	0.9752	0.9763	0.9775	0.9785	0.9796	0.9806	0.9816	0.9826	0.9836	0.9845	0.9854	0.9862	0.9870	0.9878	0.9886
b 28	0.9711	0.9724	0.9736	0.9748	0.9760	0.9772	0.9783	0.9794	0.9804	0.9815	0.9825	0.9834	0.9843	0.9852	0.9861	0.9869	0.9877
e 29	0.9694	0.9707	0.9720	0.9733	0.9745	0.9757	0.9769	0.9781	0.9792	0.9803	0.9813	0.9823	0.9833	0.9843	0.9852	0.9860	0.9869
r 30	0.9675	0.9690	0.9703	0.9717	0.9730	0.9743	0.9755	0.9767	0.9779	0.9791	0.9802	0.9812	0.9823	0.9833	0.9842	0.9852	0.9860
31	0.9657	0.9672	0.9686	0.9700	0.9714	0.9728	0.9741	0.9754	0.9766	0.9778	0.9790	0.9801	0.9812	0.9823	0.9833	0.9843	0.9852
32	0.9638	0.9654	0.9669	0.9684	0.9698	0.9713	0.9726	0.9740	0.9753	0.9766	0.9778	0.9790	0.9802	0.9813	0.9823	0.9833	0.9843
33	0.9618	0.9635	0.9651	0.9667	0.9682	0.9697	0.9712	0.9726	0.9740	0.9753	0.9766	0.9779	0.9791	0.9802	0.9814	0.9824	0.9835
34	0.9598	0.9615	0.9632	0.9649	0.9665	0.9681	0.9696	0.9711	0.9726	0.9740	0.9754	0.9767	0.9780	0.9792	0.9804	0.9815	0.9826
35	0.9577	0.9595	0.9613	0.9630	0.9647	0.9664	0.9680	0.9696	0.9712	0.9726	0.9741	0.9755	0.9768	0.9781	0.9794	0.9806	0.9817
36	0.9555	0.9574	0.9593	0.9611	0.9629	0.9646	0.9664	0.9680	0.9696	0.9712	0.9727	0.9742	0.9756	0.9770	0.9783	0.9796	0.9808
37	0.9532	0.9552	0.9571	0.9590	0.9609	0.9628	0.9646	0.9663	0.9681	0.9697	0.9713	0.9729	0.9744	0.9758	0.9772	0.9786	0.9798
38	0.9507	0.9528	0.9548	0.9569	0.9588	0.9608	0.9627	0.9645	0.9663	0.9681	0.9698	0.9715	0.9730	0.9746	0.9760	0.9775	0.9788
39	0.9481	0.9503	0.9524	0.9545	0.9566	0.9587	0.9607	0.9626	0.9645	0.9664	0.9682	0.9699	0.9716	0.9732	0.9748	0.9763	0.9777
40	0.9453	0.9476	0.9498	0.9521	0.9542	0.9564	0.9585	0.9605	0.9625	0.9645	0.9664	0.9682	0.9700	0.9717	0.9734	0.9749	0.9765
41	0.9424	0.9447	0.9471	0.9494	0.9517	0.9539	0.9561	0.9583	0.9604	0.9625	0.9645	0.9664	0.9683	0.9701	0.9718	0.9735	0.9751
42	0.9392	0.9417	0.9442	0.9466	0.9490	0.9513	0.9536	0.9559	0.9581	0.9603	0.9624	0.9644	0.9664	0.9683	0.9702	0.9719	0.9736
43	0.9359	0.9385	0.9410	0.9436	0.9461	0.9485	0.9509	0.9533	0.9556	0.9579	0.9601	0.9623	0.9644	0.9664	0.9683	0.9702	0.9720
44	0.9324	0.9351	0.9378	0.9404	0.9430	0.9455	0.9481	0.9505	0.9530	0.9554	0.9577	0.9600	0.9622	0.9643	0.9663	0.9683	0.9702
45	0.9288	0.9316	0.9343	0.9371	0.9398	0.9424	0.9451	0.9476	0.9502	0.9527	0.9551	0.9575	0.9598	0.9620	0.9642	0.9663	0.9683
46	0.9250	0.9279	0.9308	0.9336	0.9364	0.9392	0.9419	0.9446	0.9473	0.9499	0.9524	0.9549	0.9573	0.9597	0.9619	0.9641	0.9662
47	0.9212	0.9242	0.9271	0.9301	0.9330	0.9359	0.9387	0.9415	0.9443	0.9470	0.9496	0.9522	0.9548	0.9572	0.9596	0.9619	0.9641
48	0.9173	0.9204	0.9235	0.9265	0.9295	0.9325	0.9355	0.9384	0.9413	0.9441	0.9468	0.9495	0.9522	0.9547	0.9572	0.9596	0.9619
49	0.9134	0.9166	0.9198	0.9230	0.9261	0.9292	0.9322	0.9353	0.9382	0.9412	0.9440	0.9468	0.9496	0.9523	0.9548	0.9573	0.9598
50	0.9096	0.9129	0.9162	0.9195	0.9227	0.9259	0.9291	0.9322	0.9353	0.9383	0.9413	0.9442	0.9471	0.9499	0.9525	0.9552	0.9577
51	0.9058	0.9092	0.9126	0.9160	0.9193	0.9226	0.9259	0.9292	0.9323	0.9355	0.9386	0.9416	0.9445	0.9474	0.9502	0.9529	0.9555
52	0.9019	0.9054	0.9089	0.9124	0.9159	0.9193	0.9227	0.9261	0.9294	0.9326	0.9358	0.9389	0.9420	0.9449	0.9478	0.9506	0.9534
53	0.8979	0.9016	0.9053	0.9089	0.9125	0.9160	0.9195	0.9230	0.9264	0.9297	0.9330	0.9363	0.9394	0.9425	0.9455	0.9484	0.9512
54	0.8940	0.8978	0.9016	0.9054	0.9091	0.9128	0.9164	0.9199	0.9235	0.9269	0.9303	0.9337	0.9369	0.9401	0.9432	0.9462	0.9491
55	0.8901	0.8941	0.8980	0.9019	0.9057	0.9095	0.9133	0.9170	0.9206	0.9242	0.9277	0.9311	0.9345	0.9378	0.9410	0.9441	0.9471
56	0.8862	0.8903	0.8944	0.8984	0.9024	0.9063	0.9102	0.9140	0.9178	0.9215	0.9251	0.9287	0.9322	0.9356	0.9389	0.9421	0.9451
57	0.8822	0.8865	0.8907	0.8949	0.8990	0.9031	0.9072	0.9111	0.9150	0.9189	0.9226	0.9263	0.9299	0.9334	0.9368	0.9401	0.9433
58	0.8781	0.8826	0.8870	0.8913	0.8956	0.8999	0.9041	0.9082	0.9122	0.9162	0.9201	0.9239	0.9276	0.9312	0.9348	0.9382	0.9415
59	0.8739	0.8785	0.8831	0.8877	0.8921	0.8966	0.9009	0.9052	0.9094	0.9135	0.9176	0.9215	0.9254	0.9291	0.9327	0.9363	0.9397
A 60	0.8694	0.8742	0.8790	0.8838	0.8884	0.8930	0.8976	0.9020	0.9064	0.9107	0.9149	0.9190	0.9230	0.9269	0.9307	0.9343	0.9378
g 61	0.8646	0.8697	0.8747	0.8796	0.8845	0.8893	0.8940	0.8987	0.9033	0.9077	0.9121	0.9164	0.9205	0.9246	0.9285	0.9323	0.9359
e 62	0.8594	0.8647	0.8699	0.8751	0.8802	0.8852	0.8902	0.8951	0.8998	0.9045	0.9091	0.9136	0.9179	0.9221	0.9262	0.9301	0.9339
63	0.8538	0.8593	0.8648	0.8702	0.8755	0.8808	0.8860	0.8911	0.8961	0.9010	0.9058	0.9105	0.9150	0.9194	0.9237	0.9278	0.9317
o 64	0.8477	0.8534	0.8591	0.8648	0.8704	0.8759	0.8814	0.8867	0.8920	0.8971	0.9021	0.9070	0.9118	0.9164	0.9209	0.9252	0.9293
f 65	0.8410	0.8470	0.8529	0.8589	0.8647	0.8705	0.8763	0.8819	0.8874	0.8928	0.8981	0.9032	0.9082	0.9131	0.9178	0.9223	0.9266
66	0.8336	0.8399	0.8461	0.8523	0.8585	0.8646	0.8706	0.8765	0.8823	0.8880	0.8935	0.8990	0.9042	0.9093	0.9142	0.9190	0.9236
M 67	0.8256	0.8321	0.8386	0.8451	0.8516	0.8579	0.8643	0.8705	0.8766	0.8826	0.8884	0.8942	0.8997	0.9051	0.9103	0.9153	0.9201
e 68	0.8168	0.8236	0.8304	0.8372	0.8439	0.8506	0.8572	0.8638	0.8702	0.8765	0.8827	0.8887	0.8946	0.9003	0.9058	0.9111	0.9162
m 69	0.8072	0.8143	0.8214	0.8284	0.8355	0.8425	0.8495	0.8563	0.8631	0.8698	0.8763	0.8827	0.8889	0.8949	0.9007	0.9063	0.9117
b 70	0.7968	0.8041	0.8115	0.8189	0.8262	0.8336	0.8409	0.8481	0.8552	0.8623	0.8691	0.8759	0.8824	0.8888	0.8950	0.9009	0.9067
e 71	0.7856	0.7932	0.8008	0.8085	0.8162	0.8238	0.8315	0.8390	0.8465	0.8539	0.8612	0.8683	0.8753	0.8820	0.8886	0.8949	0.9010
r 72	0.7735	0.7813	0.7892	0.7972	0.8052	0.8132	0.8212	0.8291	0.8370	0.8448	0.8525	0.8600	0.8673	0.8745	0.8814	0.8881	0.8946
73	0.7606	0.7687	0.7768	0.7851	0.7934	0.8017	0.8101	0.8184	0.8266	0.8348	0.8429	0.8508	0.8586	0.8662	0.8735	0.8806	0.8875
74	0.7468	0.7552	0.7636	0.7721	0.7807	0.7894	0.7981	0.8067	0.8154	0.8240	0.8325	0.8408	0.8490	0.8570	0.8648	0.8724	0.8797
75	0.7323	0.7409	0.7495	0.7583	0.7672	0.7762	0.7852	0.7943	0.8033	0.8123	0.8212	0.8300	0.8386	0.8471	0.8553	0.8633	0.8711
76	0.7171	0.7258	0.7347	0.7438	0.7529	0.7622	0.7716	0.7810	0.7904	0.7997	0.8091	0.8183	0.8274	0.8363	0.8450	0.8535	0.8617
77	0.7012	0.7101	0.7192	0.7284	0.7379	0.7474	0.7571	0.7668	0.7766	0.7864	0.7961	0.8058	0.8153	0.8247	0.8339	0.8429	0.8516
78	0.6846	0.6936	0.7029	0.7124	0.7221	0.7319	0.7418	0.7519	0.7620	0.7722	0.7824	0.7925	0.8025	0.8123	0.8220	0.8315	0.8407
79	0.6674	0.6766	0.6860	0.6957	0.7056	0.7157	0.7259	0.7363	0.7467	0.7573	0.7678	0.7784	0.7888	0.7991	0.8093	0.8193	0.8290
80	0.6497	0.6590	0.6686	0.6784	0.6885	0.6988	0.7093	0.7199	0.7307	0.7416	0.7526	0.7635	0.7744	0.7852	0.7958	0.8063	0.8165
81	0.6317	0.6410	0.6507	0.6607	0.6709	0.6814	0.6921	0.7030	0.7141	0.7253	0.7366	0.7480	0.7593	0.7705	0.7817	0.7926	0.8033
82	0.6132	0.6227	0.6324	0.6425	0.6528	0.6635	0.6744	0.6856	0.6969	0.7084	0.7201	0.7318	0.7435	0.7552	0.7668	0.7782	0.7895
83	0.5945	0.6040	0.6138	0.6239	0.6344	0.6452	0.6563	0.6676	0.6792	0.6910	0.7030	0.7150	0.7272	0.7393	0.7513	0.7632	0.7750
84	0.5757	0.5851	0.5949	0.6051	0.6157	0.6266	0.6378	0.6493	0.6611	0.6732	0.6854	0.6978	0.7103	0.7228	0.7353	0.7476	0.7599
85	0.5567	0.5661	0.5759	0.5862	0.5967	0.6077	0.6190	0.6307	0.6427	0.6549	0.6674	0.6801	0.6929	0.7058	0.7187	0.7315	0.7442
86	0.5376	0.5470	0.5568	0.5670	0.5776	0.5886	0.6000	0.6118	0.6239	0.6363	0.6490	0.6620	0.6751	0.6883	0.7016	0.7148	0.7280
87	0.5184	0.5278	0.5375	0.5477	0.5582	0.5692	0.5807	0.5925	0.6047	0.6173	0.6302	0.6434	0.6567	0.6703	0.6839	0.6975	0.7111
88	0.4991	0.5083	0.5180	0.5281	0.5386	0.5496	0.5610	0.5729	0.5852	0.5978	0.6109	0.6242	0.6378	0.6516	0.6655	0.6795	0.6935
89	0.4802	0.4893	0.4988	0.5088	0.5193	0.5302	0.5416	0.5535	0.5658	0.5785	0.5916	0.6051	0.6189	0.6329	0.6471	0.6614	0.6757
90	0.4618	0.4708	0.4802	0.4901	0.5004	0.5113	0.5226	0.5344	0.5467	0.5595	0.5727	0.5863	0.6002	0.6144	0.6289	0.6434	0.6581
91	0.4439	0.4528	0.4621	0.4718	0.4821	0.4928	0.5041	0.5158	0.5281	0.5409	0.5541	0.5678	0.5818	0.5962	0.6108	0.6256	0.6405
92	0.4265	0.4352	0.4443	0.4539	0.4640	0.4747	0.4858	0.4975	0.5097	0.5224	0.5357	0.5494	0.5635	0.5780	0.5928	0.6078	0.6230
93	0.4094	0.4179	0.4269	0.4363	0.4463	0.4567	0.4678	0.4793	0.4915	0.5041	0.5173	0.5310	0.5452	0.5598	0.5747	0.5899	0.6053
94	0.3924	0.4007	0.4095	0.4188	0.4286	0.4389	0.4497	0.4612	0.4732	0.4857	0.4989	0.5125	0.5267	0.5413	0.5564	0.5717	0.5873
95	0.3754	0.3835	0.3921	0.4012	0.4107	0.4209	0.4315	0.4428	0.4546	0.4671	0.4801	0.4937	0.5078	0.5225	0.5375	0.5529	0.5686
96	0.3587	0.3666	0.3749	0.3838	0.3931	0.4030	0.4135	0.4246	0.4362	0.4485	0.4614	0.4749	0.4889	0.5035	0.5186	0.5340	0.5498
97	0.3423	0.3500	0.3581	0.3667	0.3759	0.3855	0.3958	0.4066	0.4181	0.4301	0.4428	0.4562	0.4701	0.4846	0.4996	0.5151	0.5309
98	0.3265	0.3339	0.3418	0.3502	0.3590	0.3685	0.3785	0.3891	0.4003	0.4121	0.4246	0.4378	0.4516	0.4659	0.4808	0.4962	0.5121
99	0.3113	0.3185	0.3262	0.3343	0.3429	0.3521	0.3618	0.3722	0.3831	0.3947	0.4070	0.4200	0.4335	0.4477	0.4625	0.4778	0.4936
100	0.2970	0.3040	0.3114	0.3193	0.3277	0.3366	0.3461	0.3562	0.3669	0.3782	0.3903	0.4030	0.4163	0.4303	0.4450	0.4601	0.4758

Montana State Retirement System
Judges' Retirement System
50% Joint Life Annuity Factors with Popup
Member Mortality: PubG-2010 Disabled Retiree; Set Forward 1 year; MP-2021 - Projected to 2021
Contingent Mortality: PubG-2010 Contingent Survivor proj to 2021; Set Forward 1 year; MP-2021 - Projected to 2040
Male/Female Mix: 70% Male, 30% Female
Interest: 7.30% per year
Post-Retirement COLA: 3.0% per year
Disability Retirement

Age	Age of Contingent Annuitant														
	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
2	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
3	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
4	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
5	0.9996	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
6	0.9995	0.9996	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999
7	0.9994	0.9995	0.9996	0.9996	0.9997	0.9997	0.9998	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999	0.9999
8	0.9992	0.9993	0.9994	0.9995	0.9996	0.9996	0.9997	0.9997	0.9998	0.9998	0.9998	0.9999	0.9999	0.9999	0.9999
9	0.9989	0.9991	0.9992	0.9993	0.9994	0.9995	0.9996	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998	0.9999	0.9999
10	0.9986	0.9988	0.9989	0.9991	0.9992	0.9993	0.9994	0.9995	0.9996	0.9997	0.9997	0.9997	0.9998	0.9998	0.9998
11	0.9982	0.9984	0.9986	0.9988	0.9989	0.9991	0.9992	0.9993	0.9994	0.9995	0.9996	0.9996	0.9997	0.9997	0.9998
12	0.9976	0.9979	0.9981	0.9983	0.9985	0.9987	0.9989	0.9990	0.9991	0.9993	0.9994	0.9995	0.9995	0.9996	0.9996
13	0.9969	0.9972	0.9975	0.9977	0.9980	0.9982	0.9984	0.9986	0.9988	0.9989	0.9990	0.9992	0.9993	0.9994	0.9994
14	0.9960	0.9964	0.9967	0.9970	0.9973	0.9975	0.9978	0.9980	0.9982	0.9984	0.9986	0.9987	0.9989	0.9990	0.9991
15	0.9950	0.9953	0.9957	0.9960	0.9963	0.9966	0.9969	0.9972	0.9974	0.9976	0.9979	0.9981	0.9982	0.9984	0.9986
16	0.9937	0.9941	0.9945	0.9948	0.9952	0.9955	0.9958	0.9961	0.9964	0.9966	0.9969	0.9971	0.9973	0.9975	0.9977
17	0.9922	0.9926	0.9930	0.9934	0.9937	0.9941	0.9944	0.9947	0.9950	0.9952	0.9955	0.9958	0.9960	0.9962	0.9964
18	0.9923	0.9927	0.9931	0.9935	0.9938	0.9941	0.9945	0.9948	0.9950	0.9953	0.9956	0.9958	0.9960	0.9963	0.9965
19	0.9925	0.9929	0.9933	0.9936	0.9940	0.9943	0.9946	0.9949	0.9952	0.9955	0.9957	0.9960	0.9962	0.9964	0.9966
20	0.9926	0.9930	0.9934	0.9938	0.9941	0.9945	0.9948	0.9951	0.9954	0.9957	0.9959	0.9962	0.9964	0.9966	0.9968
21	0.9926	0.9930	0.9934	0.9938	0.9942	0.9946	0.9949	0.9952	0.9955	0.9958	0.9961	0.9963	0.9965	0.9967	0.9969
22	0.9924	0.9929	0.9933	0.9938	0.9942	0.9946	0.9949	0.9952	0.9955	0.9958	0.9961	0.9964	0.9966	0.9968	0.9970
23	0.9920	0.9926	0.9930	0.9935	0.9939	0.9943	0.9947	0.9951	0.9954	0.9957	0.9960	0.9963	0.9965	0.9967	0.9969
24	0.9915	0.9920	0.9926	0.9931	0.9935	0.9940	0.9944	0.9947	0.9951	0.9954	0.9957	0.9960	0.9963	0.9965	0.9968
25	0.9908	0.9914	0.9919	0.9925	0.9930	0.9934	0.9939	0.9943	0.9947	0.9950	0.9954	0.9957	0.9960	0.9962	0.9965
26	0.9900	0.9907	0.9913	0.9918	0.9924	0.9929	0.9934	0.9938	0.9942	0.9946	0.9950	0.9953	0.9956	0.9959	0.9962
27	0.9893	0.9899	0.9906	0.9912	0.9918	0.9923	0.9928	0.9933	0.9937	0.9941	0.9945	0.9949	0.9952	0.9955	0.9958
28	0.9885	0.9892	0.9899	0.9905	0.9911	0.9917	0.9922	0.9927	0.9932	0.9937	0.9941	0.9945	0.9948	0.9952	0.9955
29	0.9877	0.9884	0.9892	0.9898	0.9905	0.9911	0.9917	0.9922	0.9927	0.9932	0.9936	0.9940	0.9944	0.9948	0.9951
30	0.9869	0.9877	0.9884	0.9892	0.9898	0.9905	0.9911	0.9917	0.9922	0.9927	0.9932	0.9936	0.9940	0.9944	0.9948
31	0.9861	0.9869	0.9877	0.9885	0.9892	0.9899	0.9905	0.9911	0.9917	0.9922	0.9927	0.9932	0.9936	0.9940	0.9944
32	0.9853	0.9861	0.9870	0.9878	0.9885	0.9893	0.9899	0.9906	0.9912	0.9917	0.9923	0.9927	0.9932	0.9936	0.9940
33	0.9844	0.9854	0.9863	0.9871	0.9879	0.9887	0.9894	0.9900	0.9907	0.9913	0.9918	0.9923	0.9928	0.9933	0.9937
34	0.9836	0.9846	0.9855	0.9864	0.9873	0.9881	0.9888	0.9895	0.9902	0.9908	0.9914	0.9919	0.9924	0.9929	0.9933
35	0.9828	0.9838	0.9848	0.9857	0.9866	0.9874	0.9882	0.9890	0.9897	0.9903	0.9909	0.9915	0.9920	0.9925	0.9930
36	0.9819	0.9830	0.9841	0.9850	0.9860	0.9868	0.9877	0.9884	0.9892	0.9898	0.9905	0.9911	0.9916	0.9921	0.9926
37	0.9810	0.9822	0.9833	0.9843	0.9853	0.9862	0.9871	0.9879	0.9886	0.9894	0.9900	0.9907	0.9912	0.9918	0.9923
38	0.9801	0.9813	0.9824	0.9835	0.9845	0.9855	0.9864	0.9873	0.9881	0.9888	0.9896	0.9902	0.9908	0.9914	0.9919
39	0.9790	0.9803	0.9815	0.9827	0.9838	0.9848	0.9858	0.9867	0.9875	0.9883	0.9891	0.9897	0.9904	0.9910	0.9915
40	0.9779	0.9793	0.9805	0.9818	0.9829	0.9840	0.9850	0.9860	0.9869	0.9877	0.9885	0.9892	0.9899	0.9905	0.9911
41	0.9766	0.9781	0.9794	0.9807	0.9820	0.9831	0.9842	0.9852	0.9862	0.9871	0.9879	0.9887	0.9894	0.9901	0.9907
42	0.9752	0.9768	0.9782	0.9796	0.9809	0.9821	0.9833	0.9843	0.9854	0.9863	0.9872	0.9880	0.9888	0.9895	0.9902
43	0.9737	0.9753	0.9769	0.9783	0.9797	0.9810	0.9822	0.9834	0.9845	0.9855	0.9864	0.9873	0.9881	0.9889	0.9896
44	0.9720	0.9737	0.9754	0.9769	0.9784	0.9798	0.9811	0.9823	0.9835	0.9845	0.9855	0.9865	0.9873	0.9881	0.9889
45	0.9702	0.9720	0.9737	0.9754	0.9769	0.9784	0.9798	0.9811	0.9823	0.9835	0.9846	0.9855	0.9865	0.9873	0.9881
46	0.9683	0.9702	0.9720	0.9737	0.9754	0.9769	0.9784	0.9798	0.9811	0.9823	0.9835	0.9845	0.9855	0.9864	0.9873
47	0.9662	0.9683	0.9702	0.9720	0.9738	0.9754	0.9770	0.9784	0.9798	0.9811	0.9823	0.9834	0.9845	0.9855	0.9864
48	0.9642	0.9663	0.9683	0.9702	0.9721	0.9738	0.9754	0.9770	0.9785	0.9798	0.9811	0.9823	0.9834	0.9845	0.9854
49	0.9621	0.9643	0.9664	0.9685	0.9704	0.9722	0.9739	0.9756	0.9771	0.9786	0.9799	0.9812	0.9824	0.9835	0.9845
50	0.9601	0.9624	0.9646	0.9668	0.9688	0.9707	0.9725	0.9742	0.9758	0.9773	0.9788	0.9801	0.9813	0.9825	0.9836
51	0.9580	0.9605	0.9628	0.9650	0.9671	0.9691	0.9710	0.9728	0.9745	0.9761	0.9776	0.9790	0.9803	0.9815	0.9826
52	0.9560	0.9585	0.9609	0.9632	0.9654	0.9675	0.9695	0.9713	0.9731	0.9748	0.9763	0.9778	0.9792	0.9805	0.9817
53	0.9539	0.9565	0.9590	0.9614	0.9637	0.9659	0.9679	0.9699	0.9717	0.9735	0.9751	0.9766	0.9781	0.9794	0.9807
54	0.9519	0.9546	0.9572	0.9597	0.9620	0.9643	0.9664	0.9684	0.9704	0.9722	0.9739	0.9755	0.9770	0.9784	0.9797
55	0.9500	0.9528	0.9554	0.9580	0.9604	0.9627	0.9650	0.9671	0.9690	0.9709	0.9727	0.9744	0.9759	0.9774	0.9787
56	0.9481	0.9510	0.9538	0.9564	0.9589	0.9613	0.9636	0.9657	0.9678	0.9697	0.9716	0.9733	0.9749	0.9764	0.9778
57	0.9464	0.9493	0.9522	0.9549	0.9575	0.9599	0.9623	0.9645	0.9666	0.9686	0.9705	0.9723	0.9740	0.9755	0.9770
58	0.9446	0.9477	0.9506	0.9534	0.9561	0.9586	0.9610	0.9633	0.9655	0.9676	0.9695	0.9714	0.9731	0.9747	0.9762
59	0.9429	0.9461	0.9491	0.9520	0.9547	0.9574	0.9599	0.9622	0.9645	0.9666	0.9686	0.9705	0.9722	0.9739	0.9754
60	0.9412	0.9445	0.9476	0.9506	0.9534	0.9561	0.9587	0.9611	0.9634	0.9656	0.9677	0.9696	0.9714	0.9731	0.9747
61	0.9394	0.9428	0.9460	0.9491	0.9520	0.9548	0.9575	0.9600	0.9624	0.9646	0.9667	0.9687	0.9706	0.9723	0.9740
62	0.9376	0.9410	0.9444	0.9476	0.9506	0.9535	0.9562	0.9588	0.9613	0.9636	0.9658	0.9678	0.9698	0.9716	0.9732
63	0.9355	0.9391	0.9426	0.9459	0.9491	0.9521	0.9549	0.9576	0.9601	0.9625	0.9648	0.9669	0.9689	0.9707	0.9725
64	0.9333	0.9371	0.9407	0.9441	0.9474	0.9505	0.9534	0.9562	0.9589	0.9614	0.9637	0.9659	0.9680	0.9699	0.9716
65	0.9308	0.9347	0.9385	0.9421	0.9455	0.9488	0.9518	0.9548	0.9575	0.9601	0.9625	0.9648	0.9669	0.9689	0.9707
66	0.9279	0.9321	0.9361	0.9398	0.9434	0.9468	0.9500	0.9531	0.9559	0.9586	0.9612	0.9636	0.9658	0.9678	0.9697
67	0.9247	0.9291	0.9333	0.9373	0.9410	0.9446	0.9480	0.9512	0.9542	0.9570	0.9597	0.9621	0.9645	0.9666	0.9686
68	0.9210	0.9257	0.9301	0.9343	0.9383	0.9421	0.9456	0.9490	0.9521	0.9551	0.9579	0.9605	0.9629	0.9652	0.9673
69	0.9169	0.9218	0.9265	0.9309	0.9351	0.9391	0.9429	0.9464	0.9498	0.9529	0.9559	0.9586	0.9612	0.9636	0.9658
70	0.9121	0.9174	0.9223	0.9271	0.9315	0.9358	0.9398	0.9435	0.9471	0.9504	0.9535	0.9564	0.9592	0.9617	0.9640
71	0.9068	0.9123	0.9176	0.9227	0.9274	0.9319	0.9362	0.9402	0.9440	0.9475	0.9508	0.9539	0.9568	0.9595	0.9620
72	0.9008	0.9067	0.9123	0.9177	0.9228	0.9276	0.9321	0.9364	0.9404	0.9442	0.9477	0.9511	0.9541	0.9570	0.9596
73	0.8941	0.9004	0.9064	0.9121	0.9175	0.9227	0.9275	0.9321	0.9364	0.9405	0.9442	0.9478	0.9511	0.9541	0.9570
74	0.8867	0.8934	0.8998	0.9059	0.9117	0.9172	0.9224	0.9273	0.9319	0.9362	0.9403	0.9441	0.9476	0.9509	0.9539
75	0.8785	0.8857	0.8925	0.8991	0.9053	0.9111	0.9167	0.9219	0.9269	0.9315	0.9359	0.9400	0.9437	0.9473	0.9505
76	0.8697	0.8773	0.8846	0.8915	0.8981	0.9044	0.9104	0.9160	0.9213	0.9263	0.9310	0.9353	0.9394	0.9432	0.9467
77	0.8600	0.8681	0.8759	0.8833	0.8903	0.8971	0.9034	0.9095	0.9152	0.9205	0.9255	0.9302	0.9346	0.9387	0.9425
78	0.8496	0.8582	0.8664	0.8743	0.8819	0.8890	0.8958	0.9023	0.9084	0.9142	0.9196	0.9246	0.9293	0.9337	0.9378
79	0.8384	0.8475	0.8563	0.8647	0.8727	0.8803	0.8876	0.8945	0.9011	0.9072	0.9130	0.9185	0.9236	0.9283	0.9327
80	0.8265	0.8361	0.8454	0.8543	0.8628	0.8710	0.8787	0.8861	0.8931	0.8997	0.9059	0.9118	0.9172	0.9223	0.9270
81	0.8138	0.8240	0.8338	0.8432	0.8523	0.8609	0.8692	0.8771	0.8846	0.8916	0.8983	0.9046	0.9104	0.9159	0.9210
82	0.8005	0.8111	0.8215	0.8315	0.8411	0.8503	0.8590	0.8674	0.8754	0.8830	0.8901	0.8968	0.9031	0.9090	0.9144
83	0.7865	0.7977	0.8086	0.8191	0.8292	0.8390	0.8483	0.8572	0.8657	0.8737	0.8813	0.8885	0.8952	0.9015	0.9074
84	0.7719	0.7836	0.7950	0.8061	0.8168	0.8270	0.8369	0.8464	0.8554	0.8639	0.8721	0.8797	0.8869	0.8936	0.8999
85	0.7567	0.7690	0.7809	0.7925	0.8037	0.8146	0.8250	0.8350	0.8445	0.8536	0.8623	0.8704	0.8781	0.8853	0.8920
86	0.7409	0.7537	0.7662	0.7783	0.7901	0.8015	0.8124	0.8230	0.8331	0.8427	0.8519	0.8606	0.8687	0.8764	0.8836
87	0.7245	0.7377	0.7507	0.7634	0.7757	0.7876	0.7991	0.8102	0.8209	0.8311	0.8408	0.8500	0.8587	0.8669	0.8745
88	0.7073	0.7210	0.7345	0.7476	0.7605	0.7729	0.7850	0.7966	0.8079	0.8186	0.8289	0.8386	0.8478	0.8565	0.8647
89	0.6900	0.7041	0.7180	0.7316	0.7449	0.7579	0.7705	0.7827	0.7945	0.8057	0.8165	0.8268	0.8366	0.8458	0.8544
90	0.6727	0.6872	0.7015	0.7156	0.7294	0.7429	0.7560	0.7687	0.7810	0.7928	0.8041	0.8149	0.8252	0.8349	0.8440
91	0.6555	0.6703	0.6851	0.6996	0.7138	0.7278	0.7414	0.7546	0.7674	0.7797	0.7916	0.8029	0.8137	0.8239	0.8335
92	0.6382	0.6534	0.6685	0.6835	0.6981	0.7125	0.7266	0.7403	0.7536	0.7665	0.7789	0.7907	0.8020	0.8127	0.8228
93	0.6208	0.6363	0.6518	0.6671	0.6822	0.6970	0.7115	0.7257	0.7395	0.7529	0.7658	0.7782	0.7900	0.8012	0.8119
94	0.6030	0.6188	0.6345	0.6502	0.6657	0.6809	0.6959	0.7106	0.7249	0.7388	0.7522	0.7651	0.7775	0.7892	0.8003
95	0.5846	0.6006	0.6166	0.6326	0.6484	0.6641	0.6795	0.6946	0.7094	0.7238	0.7377	0.7511	0.7640	0.7763	0.7879
96	0.5659	0.5820	0.5983	0.6146	0.6307	0.6467	0.6625	0.6781	0.6933	0.7082	0.7226	0.7366	0.7500	0.7628	0.7750
97	0.5470	0.5634	0.5798	0.5963	0.6127	0.6290	0.6452	0.6611	0.6768	0.6921	0.7070	0.7215	0.7354	0.7487	0.7614
98	0.5282	0.5446	0.5612	0.5779	0.5945	0.6111	0.6276	0.6439	0.6599	0.6757	0.6910	0.7060	0.7204	0.7342	0.7474
99	0.5097	0.5262	0.5429	0.5597	0.5765	0.5933	0.6100	0.6266	0.6430	0.6591	0.6749	0.6903	0.7051	0.7194	0.7331
100	0.4919	0.5084	0.5251	0.5420	0.5589	0.5759	0.5928	0.6097	0.6264	0.6429	0.6590	0.6747	0.6900	0.7048	0.7189