

Chapter Ret 4

ACTUARIAL TABLES

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Ret 4.01 Tables and procedures. The tables and procedures contained in this chapter, submitted by the actuary, are approved for use in making actuarial computations.

Ret 4.011 Life annuity. The following basic table, herein termed "Table E-Life—Employee Life Annuity", shall be used to compute the monthly annuity authorized by section 41.11 (6), Wis. Stats., which can be provided by each \$1,000 of available accumulated credits as provided below:

**Rule Ret 4.011
TABLE E—LIFE
EMPLOYEE LIFE ANNUITY**

Age	Monthly Life Annuity Purchased by Each \$1,000 of Accumulated Credits		
	Employer Factors	Normal Factors	Additional Factors
55	\$ 5.746	\$ 5.589	\$ 5.446
56	5.878	5.709	5.566
57	6.019	5.836	5.663
58	6.169	5.966	5.790
59	6.329	6.110	5.909
60	6.502	6.263	6.047
61	6.686	6.426	6.179
62	6.885	6.601	6.333
63	7.098	6.786	6.497
64	7.327	6.984	6.673
65	7.573	7.196	6.837
66	7.836	7.422	7.033
67	8.119	7.665	7.243
68	8.423	7.925	7.466
69	8.751	8.205	7.668
70	9.108	8.504	7.918
71	9.494	8.823	8.186
72	9.908	9.135	8.497
73	10.353	9.497	8.748
74	10.829	9.886	9.074
75	11.340	10.303	9.425
76	11.890	10.750	9.714
77	12.478	11.229	10.111
78	13.105	11.671	10.481
79	13.770	12.211	10.942
80	14.471	12.793	11.297
81	15.208	13.313	11.748
82	15.983	13.978	12.141
83	16.801	14.564	12.658
84	17.664	15.182	13.222
85	18.578	16.012	13.700

(1) Table E-Life may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of monthly annuity provided by accumulated prior service credits and municipality credits shall be computed by application of the employer credit factor at the age of the annuitant on the date the annuity begins.

(3) The amount of monthly annuity provided by accumulated normal credits and additional credits shall be computed by application of the normal and additional factors, respectively, at the age of the annuitant on the date the annuity begins.

History: 1-2-56; am. Register, November, 1957, No. 23, eff. 12-31-57; r. and recr., Register, June 1967, No. 138, eff. 7-1-67; am. intro. par. Register, February, 1970, No. 170, eff. 3-1-70.

Ret 4.012 Employee 180 payment annuity. The following basic table, herein termed "Table E-180-Employee 180 Month Certain," shall be used to compute the annuity authorized by section 41.11 (7) (a) to (d) inclusive, Wis. Stats., which is the actuarial equivalent of an annuity payable under section 41.11 (6):

Table E-180
Employee 180 Month Certain
Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity

Age	Reduction Factors	Age	Reduction Factors
55.....	.9474	71.....	.7264
56.....	.9414	72.....	.7029
57.....	.9346	73.....	.6786
58.....	.9269	74.....	.6538
59.....	.9185	75.....	.6285
60.....	.9090	76.....	.6030
61.....	.8985	77.....	.5770
62.....	.8869	78.....	.5519
63.....	.8740	79.....	.5273
64.....	.8599	80.....	.5035
65.....	.8444	81.....	.4807
66.....	.8278	82.....	.4587
67.....	.8101	83.....	.4377
68.....	.7912	84.....	.4176
69.....	.7709	85.....	.3984
70.....	.7494		

(1) Table E-180 may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of annuity with a guarantee of 180 monthly payments shall be computed by application to the amount of annuity payable if no optional form is elected, of the Table E-180 factor at the age of the annuitant on the date the annuity begins.

History: 1-2-56; am. Register, November, 1957, No. 23, eff. 12-31-57; r. and recr., Register, June, 1967, No. 138, eff. 7-1-67; am. intro. and Table E-180, Register, February, 1970, No. 170, eff. 3-1-70.

Ret 4.013 Employee 120 payment annuity. The following basic table, herein termed "Table E-120-Employee 120 Month Certain," shall be Register, November, 1970, No. 179

Rule Ret 4.034
TABLE E—LAST SURVIVOR

Difference in Age of Beneficiary	Amount of Last Survivor Annuity Equivalent to a Unit of Life Annuity										
	Age of Participating Employee										
	60	61	62	63	64	65	66	67	68	69	70
15 years less	.6308	.6202	.6094	.5984	.5875	.5765	.5656	.5546	.5434	.5320	.5208
14 years less	.6380	.6276	.6171	.6063	.5956	.5849	.5742	.5634	.5526	.5414	.5305
13 years less	.6455	.6354	.6251	.6145	.6041	.5937	.5832	.5727	.5621	.5512	.5406
12 years less	.6533	.6434	.6334	.6231	.6129	.6028	.5927	.5825	.5722	.5616	.5513
11 years less	.6615	.6518	.6421	.6321	.6222	.6124	.6026	.5927	.5827	.5724	.5624
10 years less	.6699	.6606	.6511	.6414	.6319	.6224	.6129	.6034	.5937	.5838	.5741
9 years less	.6787	.6696	.6605	.6512	.6419	.6328	.6237	.6145	.6052	.5956	.5863
8 years less	.6877	.6791	.6703	.6612	.6524	.6436	.6349	.6261	.6172	.6079	.5990
7 years less	.6971	.6888	.6804	.6717	.6632	.6548	.6465	.6381	.6296	.6208	.6123
6 years less	.7068	.6989	.6908	.6825	.6745	.6665	.6585	.6505	.6424	.6341	.6260
5 years less	.7168	.7092	.7016	.6937	.6860	.6785	.6709	.6634	.6557	.6478	.6402
4 years less	.7271	.7199	.7127	.7052	.6980	.6908	.6837	.6766	.6695	.6620	.6550
3 years less	.7377	.7309	.7240	.7170	.7102	.7035	.6969	.6903	.6836	.6767	.6702
2 years less	.7484	.7421	.7357	.7291	.7227	.7165	.7104	.7042	.6981	.6917	.6859
1 year less	.7594	.7535	.7475	.7414	.7355	.7297	.7241	.7185	.7130	.7072	.7019
Same	.7706	.7651	.7595	.7539	.7485	.7432	.7381	.7331	.7282	.7230	.7183
1 year more	.7818	.7768	.7717	.7665	.7616	.7569	.7524	.7480	.7436	.7390	.7348
2 years more	.7932	.7886	.7840	.7793	.7749	.7708	.7668	.7630	.7592	.7551	.7513
3 years more	.8046	.8005	.7964	.7922	.7884	.7848	.7814	.7781	.7748	.7711	.7677
4 years more	.8161	.8124	.8088	.8051	.8018	.7988	.7960	.7932	.7903	.7869	.7839
5 years more	.8275	.8243	.8212	.8181	.8153	.8128	.8104	.8080	.8055	.8025	.7997
6 years more	.8389	.8362	.8336	.8309	.8287	.8266	.8246	.8225	.8203	.8176	.8153
7 years more	.8501	.8479	.8458	.8437	.8418	.8401	.8384	.8367	.8348	.8324	.8304
8 years more	.8613	.8595	.8579	.8561	.8546	.8532	.8518	.8504	.8488	.8468	.8451
9 years more	.8722	.8709	.8696	.8682	.8670	.8659	.8648	.8636	.8623	.8606	.8592
10 years more	.8829	.8819	.8809	.8798	.8789	.8780	.8772	.8763	.8754	.8739	.8728

Register, November, 1970, No. 179

History: Cr. Register, December, 1965, No. 120, eff. 1-1-66; am. (table only), Register June, 1967, No. 138, eff. 7-1-67; am. intro. and (2), Register, February, 1970, No. 170, eff. 3-1-70.

EMPLOYEE TRUST FUNDS—RETIREMENT FUND

Ret 4.11 Prescribed interest. The prescribed rate of interest shall be 4% per annum compounded annually.

History: 1-2-56; am. Register, November, 1957, No. 23, eff. 12-31-57; am. Register, June, 1967, No. 138, eff. 7-1-67.

Ret 4.21 History: 1-2-56; am. Register, August, 1963, No. 92, eff. 9-1-63; r. Register, December, 1965, No. 120, eff. 1-1-66.

Ret 4.31 Disability premiums. Pursuant to section 41.04 (1) (j) 1., Wis. Stats., the disability benefit premiums shall be as follows:

Municipality Contribution Rates—Disability Benefits

The percentage is determined for each municipality as follows:

(1) Determine the prior calendar year earnings of all active employees under age 65.

(2) Determine the prior calendar year earnings of all active employees.

(3) Divide item (1) by item (2).

(4) Multiply the result in item (3) by 0.15%. The result is the percentage municipality rate for disability for the succeeding year.

History: 1-2-56; am. Register, November, 1957, No. 23, eff. 12-31-57; am. Register, July, 1962, No. 79, eff. 8-1-62; am. Register, November, 1964, No. 107, eff. 12-1-64; am. Register, December, 1965, No. 120, eff. 1-1-66; am. (4), Register, October, 1967, No. 142, eff. 11-1-67; am. (4), Register, August, 1968, No. 152, eff. 9-1-68; am. intro. par. and (4), Register, February, 1970, No. 170, eff. 3-1-70.

Ret 4.32 Disability reserve. The amount credited to the reserve for annuities granted upon the granting of any disability annuity shall be determined on the following actuarial bases:

(1) **DISABILITY ANNUITY TO EMPLOYEE.** The basis underlying the factors in section Ret 4.011, Table E-Life, modified by the assumption (1) of a mortality rate of 12% for the first year the annuity is payable; and (2) that the age of the employee is 5 years older than his actual age.

(2) **DEATH BENEFIT UNDER SECTION 41.14 (2) (e), Wis. Stats.** The basis underlying the factors in section Ret 4.031, Table B-Life.

History: 1-2-56; am. Register, November, 1957, No. 23, eff. 12-31-57; am. Register, April, 1962, No. 76, eff. 5-1-62; am. (1), Register, June, 1967, No. 138, eff. 7-1-67; am. (2), Register, February, 1970, No. 170, eff. 3-1-70.

Ret 4.35 History: Cr. Register, April, 1960, No. 52, eff. 5-1-60; r. Register, February, 1970, No. 170, eff. 3-1-70.

Ret 4.50 Combination of optional payment plans. In lieu of a retirement annuity in the normal form, any participant may, subject to the provisions of sub. (3) of this rule, elect to receive the actuarial equivalent thereof as a combined-option annuity determined by one of the following procedures:

(1) A life annuity with a guarantee of 180 monthly payments combined with a social security integrated annuity, computed as follows:

(a) Determine the amount of the annuity in the normal form.

(b) Multiply the amount determined under par. (a) by the actuarial equivalent factor A from Table E-2 interpolating for the exact age of the participant at the date the annuity begins.

**TABLE E-2
FIFTEEN YEAR CERTAIN INTEGRATED ANNUITY**

Age	Factor A	Factor B
55.....	.99337	.59223
56.....	.92659	.63800
57.....	.91910	.68748
58.....	.91079	.74094
59.....	.90156	.79866
60.....	.89129	.86090
61.....	.87991	.92793
62.....	.86732	1.00000

(c) Determine the amount of the estimated primary social security benefit payable at age 62 by application of Ret 4.015 (1), and multiply such amount by the actuarial equivalent factor B from Table E-2 interpolating for the exact age of the participant at the date the annuity begins.

(d) Add the amount determined under par. (c) to the amount determined under par. (b).

(e) The amount determined under par. (d) is payable monthly during life and termination with the payment due in the month in which the participant attains age 62 and the amount payable monthly during life thereafter will equal the amount payable prior to age 62 reduced by the estimated primary social security benefit payable at age 62.

(f) The total monthly annuity payable to the beneficiary or beneficiaries in any month after the death of the annuitant and prior to the expiry of the 180 month guarantee period shall be the amount of the annuity which would have been paid in such month to the annuitant if living.

(2) A joint survivorship annuity combined with a social security integrated annuity, computed as follows:

(a) Determine the amount of the annuity in the normal form.

(b) Multiply the amount determined under par. (a) by the actuarial equivalent factor from Table J-Joint Survivorship based on the ages of the participant and the beneficiary on the date the annuity begins.

(c) Determine the amount of the estimated primary social security benefit payable at age 62 by application of Ret 4.015 (1), and multiply such amount by the actuarial equivalent factor from Table E-3 based on the ages of the participant and the beneficiary on the date the annuity begins. Table E-3 may be extended as required to other ages on the same actuarial basis as the values shown herein.

(d) Add the amount determined under par. (c) to the amount determined under par. (b).

(e) The amount determined under par. (d) is payable monthly during life and terminating with the payment due in the month in which the participant attains age 62 and the amount payable monthly during life thereafter will equal the amount payable prior

**TABLE E-3
SURVIVOR INTEGRATED ANNUITY**

Age of Beneficiary	Age of Participating Employee							
	55	56	57	58	59	60	61	62
10 years more.....	0.58991	0.63269	0.67969	0.73145	0.78858	0.85182	0.92198	1.00000
9 years more.....	0.59294	0.63554	0.68230	0.73374	0.79047	0.85320	0.92273	1.00000
8 years more.....	0.59607	0.63847	0.68498	0.73610	0.79242	0.85463	0.92352	1.00000
7 years more.....	0.59928	0.64148	0.68773	0.73851	0.79441	0.85609	0.92433	1.00000
6 years more.....	0.60255	0.64455	0.69053	0.74097	0.79644	0.85758	0.92515	1.00000
5 years more.....	0.60588	0.64768	0.69338	0.74348	0.79851	0.85910	0.92598	1.00000
4 years more.....	0.60925	0.65084	0.69627	0.74601	0.80059	0.86063	0.92683	1.00000
3 years more.....	0.61265	0.65403	0.69919	0.74857	0.80270	0.86217	0.92768	1.00000
2 years more.....	0.61607	0.65724	0.70212	0.75114	0.80482	0.86373	0.92853	1.00000
1 year more.....	0.61950	0.66046	0.70505	0.75372	0.80694	0.86528	0.92939	1.00000
0 years more.....	0.62292	0.66366	0.70798	0.75628	0.80905	0.86683	0.93024	1.00000
1 year less.....	0.62631	0.66685	0.71089	0.75884	0.81116	0.86837	0.93109	1.00000
2 years less.....	0.62968	0.67001	0.71378	0.76137	0.81324	0.86990	0.93193	1.00000
3 years less.....	0.63301	0.67313	0.71662	0.76387	0.81530	0.87140	0.93275	1.00000
4 years less.....	0.63629	0.67620	0.71943	0.76633	0.81732	0.87289	0.93357	1.00000
5 years less.....	0.63952	0.67922	0.72218	0.76874	0.81931	0.87434	0.93437	1.00000
6 years less.....	0.64268	0.68218	0.72488	0.77110	0.82125	0.87576	0.93515	1.00000
7 years less.....	0.64578	0.68508	0.72751	0.77341	0.82315	0.87715	0.93592	1.00000
8 years less.....	0.64880	0.68791	0.73008	0.77566	0.82500	0.87850	0.93666	1.00000
9 years less.....	0.65175	0.69066	0.73259	0.77785	0.82679	0.87982	0.93738	1.00000
10 years less.....	0.65462	0.69334	0.73502	0.77998	0.82854	0.88109	0.93808	1.00000

to age 62 reduced by the estimated primary social security benefit payable at age 62.

(f) The total monthly annuity payable to the beneficiary in any month he survives after the death of the participant, shall be 75% of the amount of the annuity which would have been paid in such month to the participant if living.

(3) No combined-option annuity may be elected if the amount payable monthly thereunder to the participant during his lifetime after attaining age 62 would be less than \$25.00.

History: Cr. Register, November, 1970, No. 179, eff. 1-1-71.

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