Appendix D: Computing a Retired-Worker Benefit

Overview

This section provides instructions and a worksheet for computing a retired-worker benefit for persons born in the years 1945 through 1961—that is, those who attained age 62 from 2007 through 2023. The worksheet assumes that the worker had no prior period of entitlement to disability benefits and did not work after becoming entitled to retired-worker benefits.

The worksheet describes the various steps used in computing a benefit. The steps are based on the following Social Security program goals:

- *To provide a benefit based on lifetime earnings.* Benefits are related to the 35 highest earnings years (the number of computation years), but only for years after 1950. If there are fewer than 35 years with earnings, then years of no earnings are included among the 35 computation years.

- *To index lifetime earnings.* Earnings used in the computation are not the actual covered earnings but an amount that reflects earnings increases in average wage levels for each year after the earnings were paid. This procedure is termed *wage indexing.* Currently, earnings are generally indexed to wage levels in the year the worker turns age 60. For example, for a person attaining age 62 in 2023, actual earnings in 1990 of $20,000 are indexed to $57,613.78, on the basis of 2021 wage levels. Earnings after age 60 are included at their actual (nominal) value.

- *To replace a portion of the indexed earnings.* Indexed earnings are averaged over the number of computation years to calculate the average indexed monthly earnings (AIME). A benefit formula is applied to the AIME as the first step in computing the *primary insurance amount* (PIA), the amount payable to a worker who retires at the full retirement age (FRA). The benefit formula is weighted to provide a higher replacement of earnings for lower-wage workers. The formula for persons aged 62 in 2023 is 90 percent of the first $1,115 of AIME; plus 32 percent of the next $5,606; plus 15 percent of the AIME over $6,721.

- *To permit early retirement.* Persons can retire as early as age 62, but the monthly benefit is reduced. This reduction applies to all future benefits. The reduction is calculated as $5/9$ of 1 percent for each month immediately preceding the FRA, up to 36 months. If the number of months exceeds 36, then the benefit is further reduced $5/12$ of 1 percent per month. For a person aged 62 in 2023, the maximum reduction is 30 percent if the individual is entitled to benefits for all 60 months between ages 62 and 67.

- *To provide for price indexing after age 62.* Benefits are adjusted annually in December to reflect increases in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). The benefit increase in 2022 was 8.7 percent. These cost-of-living adjustments are applied to the benefit for each year after the person attained age 62—even if the person was not actually receiving benefits.

- *To give credit for earnings after age 61.* Earnings after age 61 (which are not indexed) can be substituted for earnings in earlier years if they result in a higher benefit.

- *To give credit for late retirement.* Persons who initiate benefits after FRA may receive increased benefits as a result of the delayed retirement credit provision. The benefit is increased by a specified percentage for each month between FRA and age 70 a benefit is deferred. See Table 2.A20 for percentage increases.

Clarifying the Worksheet Procedure

Step 1 - Wage Indexing of Earnings

The following description and examples are provided for persons who wish to compute the index factors and indexed earnings. The indexing year is the year a person attains age 60. Beneficiaries born on January 1 are deemed to have attained age 60 on December 31 of the prior year.

The average wage for the indexing year is divided by the average wage in each prior year to obtain the factor for each prior year. For example, for a person attaining age 62 in 2023, the indexing year is 2021. The average annual wage for 2021 was $60,575.07. The average annual wage for 1990 was $21,027.98. The amount $60,575.07 divided by $21,027.98 yields a factor of 2.8806890.

The worker's actual earnings covered under Social Security in that year, up to the maximum earnings creditable, are multiplied by the indexing factor to obtain the indexed earnings (see Worksheet 1). For example, actual covered earnings of $10,000 in 1990, multiplied by 2.8806890, result in indexed earnings of $28,806.89; actual earnings of $51,300 (the maximum creditable) result in indexed earnings of $147,779.35.

Step 2 - Computing the Average Indexed Monthly Earnings (AIME)

After the earnings in each year have been indexed, they are used in computing average indexed monthly earnings. The years of highest indexed earnings corresponding to the number of computation years are selected and totaled. This total is then divided by the number of months in the computation years. The result, rounded to the nearest lower dollar, is the average indexed monthly earnings.

For example, for a person attaining age 62 in 2023, the highest 35 years of indexed earnings are used. If the sum of these earnings equals $400,000, the AIME is $952 ($400,000 divided by 420 months = $952.38, rounded to $952).

Step 3 - Computing the Primary Insurance Amount (PIA)

The PIA, the amount from which all Social Security benefits payable on a worker's earnings record are based, is computed by applying (1) a formula to the AIME and (2) cost-of-living adjustments (COLAs) to the formula's result. Amounts are rounded to the nearest lower 10 cents at each computation step.

The PIA formula consists of three AIME brackets, to each of which a given percentage applies. The dollar amounts defining the brackets are called *bend points,* and the bend points are different for each calendar year of attainment of age 62. The percentages—90 percent for the first bracket, 32 percent for the second bracket, and 15 percent for the third bracket—are consistent from year to year.

For retired workers who attained age 62 in 2023, the bend points are $1,115 and $6,721. Thus the formula is 90 percent of the first $1,115 of AIME; plus 32 percent of the next $5,606 of AIME; plus 15 percent of AIME above $6,721. The following examples illustrate the computations for workers with different AIME amounts.

Example 1 - AIME of $700
    Result is $630
    Based on: 90 percent of $700

Example 2 - AIME of $3,000
    Result is $1,606.70, rounded to $1,606.70
    Based on: 90 percent of $1,115 ($1,003.50); plus
            32 percent of $1,885 ($603.20)

Example 3 - AIME of $8,000
    Result is $2,989.27, rounded to $2,989.20
    Based on: 90 percent of $1,115 ($1,003.50); plus
            32 percent of $5,606 ($1,793.92); plus
            15 percent of $1,279 ($191.85)

The above calculations are applicable to workers who attain age 62 in 2023. For workers who attained age 62 in prior years, the bend points are different, and the result of the computation must be increased to reflect COLAs between the year of attainment of age 62 and 2023. Worksheet 2 shows bend points and COLA factors for 2008 through 2023.

For example, a worker who attained age 62 in 2020 would receive COLAs for the years 2020–2022. The adjustments are cumulative, with each step rounded to the next lower dime. Continuing from Example 2 above, the COLA computations would be:

2020: $1,606.70 multiplied by 1.013 = $1,627.59, rounded to $1,627.50

2021: $1,627.50 multiplied by 1.059 = $1,723.52, rounded to $1,723.50

2022: $1,723.50 multiplied by 1.087 = $1,873.44, rounded to $1,873.40

$1,873.40 would be the PIA effective December 2022.

Step 4 - Computation of the Monthly Benefit

The PIA is payable to a worker who claims at the full retirement age (FRA). In 2000, workers reaching age 62 were the first to be affected by incremental increases in the FRA—from age 65 for workers born before 1938 to age 67 for workers born 1960 and later.

Early retirement reduces benefits:

Workers can retire as early as age 62, but the monthly benefit is reduced. The reduction is calculated as $5/9$ of 1 percent for each month immediately preceding the FRA, up to 36 months. If the number of months exceeds 36, then the benefit is further reduced $5/12$ of 1 percent per month. Workers attaining age 62 in 2023 have their benefits computed based on the FRA of 67. See Table 2.A17.1 to determine the FRA based on the year of birth as well as the benefit reduction factors. For individuals electing benefits at age 62 in 2023, the maximum reduction is 30 percent.

For example, in 2023 a worker with a PIA of $1,606.70 would receive $1,124 at age 62. The PIA is reduced by $482.01, reflecting a reduction rate of $5/9$ of 1 percent for each of the first 36 months and a reduction rate of $5/12$ of 1 percent for each of the additional 24 months for a total reduction of 30 percent. After reducing the PIA by $482.01, the result ($1,124.69) is rounded to the next lower dollar. This is the monthly benefit amount.

Delayed retirement increases benefits:

Delayed retirement increases the benefit amount (by a certain percentage depending on a person's date of birth) if the worker delays retirement beyond FRA. Benefit increases stop accumulating when the worker reaches age 70, even if he or she continues to delay taking benefits. Delayed-retirement increases begin to apply to benefits in January of the year following the year the worker reaches FRA. The credit given for delayed retirement is 8 percent per year ($16/24$ of 1 percent monthly) for those born 1943 and later. See Table 2.A20 for percentage increases.

For example, a worker born in April 1956 reached FRA in August 2022. If the worker delayed receiving benefits until January 2023 (5 months after FRA), his or her benefit is 103.333% of the PIA. If the worker's PIA is $1,553.90, the credit for delayed claiming brings that amount to $1,605.69. That amount, rounded to the nearest lower dollar ($1,605), is the monthly benefit amount.

Deductions and other adjustments:

Depending on an individual's circumstances, the monthly benefit amount that results from these computations may be subject to adjustments. For details, see https://secure.ssa.gov/poms.nsf/lnx/0300601020.

Instructions for computing a retired-worker benefit (only for workers attaining age 62 in years 2008–2023)

	STEP 1.—Indexing of Earnings (Use Worksheet 1 for Steps 1 and 2.)	
1	Enter in column 2 your earnings in each year 1951 through 2022. If none, enter "0."	
2	Column 3 contains the maximum earnings creditable under Social Security for each year.	
3	Enter in column 4 the lower amount from columns 2 or 3 for each year.	
4	Enter in column 5 the indexing factors applicable to the year you attained age 62 from Table 2.A8. (This table contains the indexing factors for persons attaining age 62 during the period 2008–2023.)	
5	Multiply column 4 by column 5 and enter results in column 6 in dollars and cents. These are your indexed earnings.	
	STEP 2.—Computing the Average Indexed Monthly Earnings (AIME)	
6	Place an "X" in column 7 next to each of the 35 highest indexed earnings entries.	
7	Add all individual indexed earnings marked with an "X."	
8	Number of months in the computation period (35 × 12).	420
9	Divide line 7 by line 8.	
10	Round the result in line 9 to the next lower dollar. This is your average indexed monthly earnings (AIME).	
	STEP 3.—Computing the Primary Insurance Amount (PIA) (Use Worksheet 2 for Step 3.)	
11	Enter first bend point from Worksheet 2 based on year of attainment of age 62. (If your birthday is January 1, enter prior year.)	
12	Enter second bend point from Worksheet 2.	
13	If your AIME (obtained in line 10) is equal to or less than line 11, complete line 14, otherwise skip to line 15.	
14	Multiply line 10 by 0.9. (If you receive a pension on the basis of noncovered employment, see Table 2.A11.1.) Round to next lower dime and enter the result. Continue with line 24.	
15	If your AIME (obtained in line 10) is greater than line 11 but less than or equal to line 12, complete lines 16–18, otherwise skip to line 19.	
16	Multiply line 11 by 0.9. (If you receive a pension on the basis of noncovered employment, see Table 2.A11.1.)	
17	Subtract line 11 from line 10 then multiply by 0.32.	
18	Add line 16 to line 17, and round to next lower dime and enter the result. Continue with line 24.	
19	If your AIME (obtained in line 10) is greater than line 12, complete lines 20–23.	
20	Multiply line 11 by 0.9. (If you receive a pension on the basis of noncovered employment, see Table 2.A11.1.)	
21	Subtract line 11 from line 12 then multiply by 0.32.	
22	Subtract line 12 from line 10 then multiply by 0.15.	
23	Add lines 20, 21, and 22, and round to the next lower dime and enter the result. Continue with line 24.	
24	If you attained age 62 in 2023, skip to line 30. Otherwise you will need to adjust your computation to reflect cost-of-living adjustments (COLAs) from the year you attained age 62 through 2022 by using lines 25–29 and Worksheet 2.	
25	Enter year of attainment of age 62.	
26	Place an "X" corresponding to the year you attained age 62 in column 5 (Worksheet 2).	
27	Place an "X" in column 5 (Worksheet 2) next to each subsequent year through 2022.	
28	Enter your result from either line 14, 18, or 23—here and in the first row of column 6 (Worksheet 2).	
29	Beginning with first year marked in Worksheet 2, multiply your benefit formula result (from line 28 above) by the corresponding factor (column 4), round to the next lower dime, and enter in column 6. The resulting amount is then multiplied by the next factor and is again rounded to the next lower dime. Continue this process through 2022. Enter this last figure, which is your PIA effective December 2022.	

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Instructions for computing a retired-worker benefit (only for workers attaining age 62 in years 2008–2023)—*Continued*

	STEP 4.—Computing the Monthly Benefit	
30	Enter the PIA from either line 14, 18, 23, or 29.	
31	Using Table 2.A17.1, determine your full retirement age and enter here.	
32	If you retired at your full retirement age, round the PIA from line 30 to the next lower dollar to obtain your monthly benefit. If you retired before the full retirement age, skip to line 33. If you retired after the full retirement age, skip to line 43.	
33	If you retired before the full retirement age, enter your age at retirement in years and months, and complete lines 34–42.	
34	Subtract line 33 from line 31, and convert the result to months to determine the total number of reduction months.	
35	If line 34 is greater than 36 reduction months, subtract 36 months and enter the result here.	
36	"0.0055556" (the decimal equivalent of $5/9$ of 1 percent—the monthly reduction factor for the first 36 months) has been entered.	0.0055556
37	"0.0041667" (the decimal equivalent of $5/12$ of 1 percent—the monthly reduction factor for months above 36) has been entered.	0.0041667
38	Multiply line 34 (but not more than 36 months) by line 36 to obtain the percent reduction for the first 36 months.	
39	Multiply line 35 by line 37 to obtain the percent reduction for months in excess of 36.	
40	Add line 38 to line 39 to obtain the total percent reduction.	
41	Multiply line 30 by line 40 to obtain the amount of benefit reduction.	
42	Subtract line 41 from line 30, and round to the next lower dollar to obtain your monthly benefit.	
43	If you retired (or plan to retire) after the full retirement age, enter your actual (or planned) age at retirement in years and months, and complete lines 44–48. If you worked (or plan to work) after attaining age 70, enter "70 years 0 months."	
44	Subtract line 31 from line 43, and convert the result to months to determine the total number of delayed months.	
45	"0.006667" (the decimal equivalent of $16/24$ of 1 percent—the monthly percentage increase for persons born 1943 or later) has been entered.	0.006667
46	Multiply line 44 by line 45 to obtain the total percent increase.	
47	Multiply line 30 by line 46 to obtain the amount of benefit increase.	
48	Add line 30 to line 47, and round to the next lower dollar to obtain your monthly benefit.	

NOTE: The final benefit amount may be adjusted to account for Medicare premium deductions and other factors that apply case by case.

Worksheet 1: Indexing of earnings

Year	Your earnings	Maximum taxable earnings ($)	Lower of columns 2 or 3	Indexing factor	Column 4 times column 5	Highest indexed earnings
1	2	3	4	5	6	7
1951		3,600				
1952		3,600				
1953		3,600				
1954		3,600				
1955		4,200				
1956		4,200				
1957		4,200				
1958		4,200				
1959		4,800				
1960		4,800				
1961		4,800				
1962		4,800				
1963		4,800				
1964		4,800				
1965		4,800				
1966		6,600				
1967		6,600				
1968		7,800				
1969		7,800				
1970		7,800				
1971		7,800				
1972		9,000				
1973		10,800				
1974		13,200				
1975		14,100				
1976		15,300				
1977		16,500				
1978		17,700				
1979		22,900				
1980		25,900				
1981		29,700				
1982		32,400				
1983		35,700				
1984		37,800				
1985		39,600				
1986		42,000				
1987		43,800				

(Continued)

Worksheet 1: Indexing of earnings—*Continued*

Year	Your earnings	Maximum taxable earnings ($)	Lower of columns 2 or 3	Indexing factor	Column 4 times column 5	Highest indexed earnings
1	2	3	4	5	6	7
1988		45,000				
1989		48,000				
1990		51,300				
1991		53,400				
1992		55,500				
1993		57,600				
1994		60,600				
1995		61,200				
1996		62,700				
1997		65,400				
1998		68,400				
1999		72,600				
2000		76,200				
2001		80,400				
2002		84,900				
2003		87,000				
2004		87,900				
2005		90,000				
2006		94,200				
2007		97,500				
2008		102,000				
2009		106,800				
2010		106,800				
2011		106,800				
2012		110,100				
2013		113,700				
2014		117,000				
2015		118,500				
2016		118,500				
2017		127,200				
2018		128,400				
2019		132,900				
2020		137,700				
2021		142,800				
2022		147,000				

Worksheet 2: Computing the primary insurance amount (PIA) for workers retiring after age 62

Year	1st bend point ($)	2nd bend point ($)	Cost-of-living increase (%)	Cost-of-living factor	Years aged 62 or older	Incremental COLA computation ($)
	1	2	3	4	5	6
					Benefit formula result (line 28 of instructions):	
2008	711	4,288	5.8	1.058		
2009	744	4,483	0.0	1.000		
2010	761	4,586	0.0	1.000		
2011	749	4,517	3.6	1.036		
2012	767	4,624	1.7	1.017		
2013	791	4,768	1.5	1.015		
2014	816	4,917	1.7	1.017		
2015	826	4,980	0.0	1.000		
2016	856	5,157	0.3	1.003		
2017	885	5,336	2.0	1.020		
2018	895	5,397	2.8	1.028		
2019	926	5,583	1.6	1.016		
2020	960	5,785	1.3	1.013		
2021	996	6,002	5.9	1.059		
2022	1,024	6,172	8.7	1.087		
2023	1,115	6,721	. . .	. . .		

NOTE: . . . = not applicable.

CONTACT: statistics@ssa.gov.

Table 2.A8—Factors for indexing earnings in a benefit computation, 1951–2023

| Year | Annual maximum taxable earnings (dollars) | Average annual wage [a] (dollars) | Factors for workers who were first eligible (attained age 62, became disabled, or died) in[b]— | | | | | | | |
			2008	2009	2010	2011	2012	2013	2014	2015
1951	3,600	2,799.16	13.8082175	14.4348590	14.7669194	14.5442240	14.8879771	15.3544671	15.8339180	16.0362966
1952	3,600	2,973.32	12.9994114	13.5893479	13.9019581	13.6923069	14.0159250	14.4550906	14.9064581	15.0969825
1953	3,600	3,139.44	12.3115619	12.8702826	13.1663513	12.9677936	13.2742878	13.6902155	14.1176993	14.2981423
1954	3,600	3,155.64	12.2483585	12.8042109	13.0987597	12.9012213	13.2061420	13.6199345	14.0452238	14.2247405
1955	4,200	3,301.44	11.7074398	12.2387443	12.5202851	12.3314705	12.6229251	13.0184435	13.4249509	13.5965397
1956	4,200	3,532.36	10.9420925	11.4386642	11.7017999	11.5253287	11.7977301	12.1673923	12.5473253	12.7076968
1957	4,200	3,641.72	10.6135041	11.0951638	11.3503976	11.1792258	11.4434471	11.8020084	12.1705321	12.3260877
1958	4,200	3,673.80	10.5208258	10.9982797	11.2512848	11.0816076	11.3435217	11.6989520	12.0642577	12.2184550
1959	4,800	3,855.80	10.0242258	10.4791431	10.7202059	10.5585378	10.8080891	11.1467426	11.4948052	11.6417242
1960	4,800	4,007.12	9.6456832	10.0834215	10.3153811	10.1598180	10.3999456	10.7258106	11.0607294	11.2021003
1961	4,800	4,086.76	9.4577147	9.8869226	10.1143620	9.9618304	10.1972785	10.5167933	10.8451854	10.9838013
1962	4,800	4,291.40	9.0067134	9.4154542	9.6320478	9.4867899	9.7110104	10.0152887	10.3280212	10.4600270
1963	4,800	4,396.64	8.7911246	9.1900815	9.4014907	9.2597097	9.4785632	9.7755582	10.0808049	10.2096510
1964	4,800	4,576.32	8.4459588	8.8292515	9.0323601	8.8961458	9.1064065	9.3917405	9.6850024	9.8087896
1965	4,800	4,658.72	8.2965729	8.6730862	8.8726023	8.7387974	8.9453391	9.2256264	9.5137012	9.6352990
1966	6,600	4,938.36	7.8267704	8.1819632	8.3701816	8.2439535	8.4387995	8.7032152	8.9749775	9.0896897
1967	6,600	5,213.44	7.4138016	7.7502532	7.9285405	7.8089726	7.9935379	8.2440020	8.5014252	8.6100847
1968	7,800	5,571.76	6.9370199	7.2518342	7.4186559	7.3067774	7.4794733	7.7138301	7.9546983	8.0563700
1969	7,800	5,893.76	6.5580224	6.8556371	7.0133446	6.9075785	7.0708393	7.2923923	7.5201009	7.6162178
1970	7,800	6,186.24	6.2479648	6.5315086	6.6817598	6.5809943	6.7365362	6.9476144	7.1645571	7.2561297
1971	7,800	6,497.08	5.9490433	6.2190215	6.3620842	6.2661396	6.4142399	6.6152195	6.8217830	6.9089745
1972	9,000	7,133.80	5.4180675	5.6639491	5.7942429	5.7068617	5.8417435	6.0247848	6.2129118	6.2923211
1973	10,800	7,580.16	5.0990230	5.3304257	5.4530472	5.3708114	5.4977507	5.6700136	5.8470626	5.9217958
1974	13,200	8,030.76	4.8129206	5.0313395	5.1470807	5.0694592	5.1892760	5.3518733	5.5189882	5.5895283
1975	14,100	8,630.92	4.4782491	4.6814801	4.7891731	4.7169491	4.8284343	4.9797252	5.1352197	5.2008546
1976	15,300	9,226.48	4.1891827	4.3792952	4.4800368	4.4124747	4.5167637	4.6582890	4.8037464	4.8651447
1977	16,500	9,779.44	3.9523132	4.1316763	4.2267216	4.1629797	4.2613718	4.3948948	4.5321276	4.5900542
1978	17,700	10,556.03	3.6615479	3.8277155	3.9157685	3.8567160	3.9478696	4.0715695	4.1987063	4.2523714
1979	22,900	11,479.46	3.3670059	3.5198067	3.6007765	3.5464743	3.6302953	3.7440446	3.8609543	3.9103024
1980	25,900	12,513.46	3.0887868	3.2289615	3.3032407	3.2534255	3.3303203	3.4346703	3.5419197	3.5871901
1981	29,700	13,773.10	2.8062971	2.9336518	3.0011377	2.9558785	3.0257408	3.1205473	3.2179880	3.2591181
1982	32,400	14,531.34	2.6598655	2.7805750	2.8445395	2.8016418	2.8678587	2.9577183	3.0500745	3.0890585
1983	35,700	15,239.24	2.5363082	2.6514104	2.7124036	2.6714987	2.7346397	2.8203250	2.9083911	2.9455642
1984	37,800	16,135.07	2.3954907	2.5042023	2.5618092	2.5231753	2.5828106	2.6637387	2.7469153	2.7820245
1985	39,600	16,822.51	2.2976007	2.4018699	2.4571226	2.4200675	2.4772659	2.5548869	2.6346645	2.6683390
1986	42,000	17,321.82	2.2313712	2.3326348	2.3862949	2.3503079	2.4058575	2.4812410	2.5587190	2.5914228
1987	43,800	18,426.51	2.0975980	2.1927907	2.2432338	2.2094043	2.2616236	2.3324878	2.4053209	2.4360641
1988	45,000	19,334.04	1.9991378	2.0898622	2.1379375	2.1056960	2.1554641	2.2230020	2.2924164	2.3217165
1989	48,000	20,099.55	1.9229988	2.0102679	2.0565122	2.0254986	2.0733713	2.1383369	2.2051076	2.2332918
1990	51,300	21,027.98	1.8380943	1.9215103	1.9657128	1.9360685	1.9818275	2.0439248	2.1077474	2.1346872
1991	53,400	21,811.60	1.7720575	1.8524767	1.8950911	1.8665119	1.9106269	1.9704932	2.0320229	2.0579948
1992	55,500	22,935.42	1.6852279	1.7617066	1.8022330	1.7750540	1.8170075	1.8739404	1.9324551	1.9571545
1993	57,600	23,132.67	1.6708581	1.7466847	1.7868655	1.7599183	1.8015140	1.8579615	1.9159773	1.9404660
1994	60,600	23,753.53	1.6271859	1.7010305	1.7401611	1.7139183	1.7544268	1.8093989	1.8658982	1.8897469
1995	61,200	24,705.66	1.5644759	1.6354746	1.6730972	1.6478657	1.6868131	1.7396665	1.7939885	1.8169181
1996	62,700	25,913.90	1.4915320	1.5592203	1.5950887	1.5710337	1.6081651	1.6585543	1.7103435	1.7322040
1997	65,400	27,426.00	1.4092981	1.4732546	1.5071454	1.4844166	1.5195008	1.5671119	1.6160457	1.6367009
1998	68,400	28,861.44	1.3392059	1.3999814	1.4321867	1.4105883	1.4439276	1.4891707	1.5356708	1.5552987
1999	72,600	30,469.84	1.2685137	1.3260811	1.3565864	1.3361281	1.3677075	1.4105624	1.4546079	1.4731997

(Continued)

Table 2.A8—Factors for indexing earnings in a benefit computation, 1951–2023—*Continued*

Year	Annual maximum taxable earnings (dollars)	Average annual wage [a] (dollars)	Factors for workers who were first eligible (attained age 62, became disabled, or died) in [b]—							
			2016	2017	2018	2019	2020	2021	2022	2023
1951	3,600	2,799.16	16.6055245	17.1832371	17.3774097	17.9774968	18.6290887	19.3272232	19.8733191	21.6404457
1952	3,600	2,973.32	15.6328683	16.1767418	16.3595408	16.9244784	17.5379038	18.1951455	18.7092543	20.3728727
1953	3,600	3,139.44	14.8056723	15.3207674	15.4938938	16.0289383	16.6099050	17.2323695	17.7192748	19.2948647
1954	3,600	3,155.64	14.7296650	15.2421157	15.4143533	15.9466511	16.5246353	17.1439042	17.6283099	19.1958113
1955	4,200	3,301.44	14.0791655	14.5689850	14.7336162	15.2424063	15.7948653	16.3867858	16.8497989	18.3480754
1956	4,200	3,532.36	13.1587720	13.6165708	13.7704396	14.2459687	14.7623119	15.3155369	15.7482816	17.1486117
1957	4,200	3,641.72	12.7636172	13.2076684	13.3569165	13.8181656	14.3190031	14.8556149	15.2753644	16.6336429
1958	4,200	3,673.80	12.6521640	13.0923376	13.2402825	13.6975039	14.1939681	14.7258942	15.1419783	16.4883962
1959	4,800	3,855.80	12.0549614	12.4743581	12.6153198	13.0509596	13.5239898	14.0308081	14.4272525	15.7101172
1960	4,800	4,007.12	11.5997325	12.0032916	12.1389302	12.5581190	13.0132864	13.5009658	13.8824393	15.1168595
1961	4,800	4,086.76	11.3736848	11.7693797	11.9023750	12.3133950	12.7596923	13.2378681	13.6119077	14.8222724
1962	4,800	4,291.40	10.8313185	11.2081442	11.3347975	11.7262176	12.1512327	12.6066062	12.9628093	14.1154565
1963	4,800	4,396.64	10.5720550	10.9398609	11.0634826	11.4455334	11.8603752	12.3048487	12.6525256	13.7775824
1964	4,800	4,576.32	10.1569645	10.5103293	10.6290972	10.9961476	11.3947014	11.8217236	12.1557496	13.2366334
1965	4,800	4,658.72	9.9773157	10.3244303	10.4410976	10.8016558	11.1931604	11.6126296	11.9407477	13.0025136
1966	6,600	4,938.36	9.4123393	9.7397982	9.8498591	10.1900003	10.5593355	10.9550519	11.2645899	12.2662321
1967	6,600	5,213.44	8.9157102	9.2258912	9.3301448	9.6523390	10.0021867	10.3770236	10.6702293	11.6190212
1968	7,800	5,571.76	8.3423407	8.6325739	8.7301230	9.0315968	9.3589458	9.7096770	9.9840266	10.8718017
1969	7,800	5,893.76	7.8865648	8.1609414	8.2531610	8.5381641	8.8476287	9.1791980	9.4385587	10.2778311
1970	7,800	6,186.24	7.5136949	7.7750993	7.8629588	8.1344872	8.4293206	8.7452136	8.9923120	9.7919043
1971	7,800	6,497.08	7.1542170	7.4031149	7.4867710	7.7453087	8.0260363	8.3268160	8.5620925	9.3234299
1972	9,000	7,133.80	6.5156747	6.7423575	6.8185469	7.0540091	7.3096807	7.5836146	7.7978917	8.4912767
1973	10,800	7,580.16	6.1319972	6.3453318	6.4170347	6.6386316	6.8792479	7.1370512	7.3387105	7.9912654
1974	13,200	8,030.76	5.7879354	5.9892999	6.0569797	6.2661429	6.4932584	6.7365965	6.9269409	7.5428814
1975	14,100	8,630.92	5.3854653	5.5728277	5.6358013	5.8304202	6.0417429	6.2681603	6.4452689	7.0183793
1976	15,300	9,226.48	5.0378389	5.2131073	5.2720160	5.4540724	5.6517545	5.8635568	6.0292333	6.5653499
1977	16,500	9,779.44	4.7529838	4.9183420	4.9739198	5.1456822	5.3321867	5.5320131	5.6883216	6.1941246
1978	17,700	10,556.03	4.4033145	4.5565075	4.6079966	4.7671227	4.9399064	5.1250319	5.2698410	5.7384329
1979	22,900	11,479.46	4.0491034	4.1899732	4.2373204	4.3836461	4.5425307	4.7127644	4.8459248	5.2768223
1980	25,900	12,513.46	3.7145218	3.8437514	3.8871863	4.0214209	4.1671768	4.3233438	4.4455011	4.8407930
1981	29,700	13,773.10	3.3748045	3.4922153	3.5316777	3.6536357	3.7860612	3.9279458	4.0389310	4.3980709
1982	32,400	14,531.34	3.1987084	3.3099927	3.3473960	3.4629903	3.5885059	3.7229870	3.8281810	4.1685811
1983	35,700	15,239.24	3.0501206	3.1562355	3.1919013	3.3021260	3.4218111	3.5500451	3.6503526	3.9749404
1984	37,800	16,135.07	2.8807759	2.9809992	3.0146848	3.1187897	3.2318298	3.3529442	3.4476826	3.7542490
1985	39,600	16,822.51	2.7630550	2.8591827	2.8914918	2.9913426	3.0997634	3.2159285	3.3067955	3.6008342
1986	42,000	17,321.82	2.6834086	2.7767654	2.8081431	2.9051156	3.0104111	3.1232278	3.2114755	3.4970384
1987	43,800	18,426.51	2.5225352	2.6102952	2.6397918	2.7309507	2.8299336	2.9359868	3.0189439	3.2873870
1988	45,000	19,334.04	2.4041287	2.4877692	2.5158813	2.6027612	2.6970980	2.7981731	2.8772362	3.1330788
1989	48,000	20,099.55	2.3125652	2.3930202	2.4200616	2.5036327	2.5943765	2.6916021	2.7676540	3.0137525
1990	51,300	21,027.98	2.2104605	2.2873633	2.3132108	2.3930920	2.4798293	2.5727621	2.6454562	2.8806890
1991	53,400	21,811.60	2.1310459	2.2051858	2.2301046	2.3071159	2.3907370	2.4803311	2.5504135	2.7771952
1992	55,500	22,935.42	2.0266261	2.0971332	2.1208310	2.1940688	2.2735925	2.3587966	2.4254450	2.6411145
1993	57,600	23,132.67	2.0093452	2.0792511	2.1027469	2.1753602	2.2542058	2.3386833	2.4047635	2.6185940
1994	60,600	23,753.53	1.9568258	2.0249045	2.0477862	2.1185015	2.1952863	2.2775558	2.3419088	2.5501502
1995	61,200	24,705.66	1.8814118	1.9468668	1.9688666	2.0368567	2.1106823	2.1897812	2.2516541	2.4518701
1996	62,700	25,913.90	1.7936906	1.8560938	1.8770679	1.9418879	2.0122714	2.0876823	2.1466703	2.3375513
1997	65,400	27,426.00	1.6947976	1.7537603	1.7735780	1.8348243	1.9013272	1.9725804	2.0283162	2.2086732
1998	68,400	28,861.44	1.6105059	1.6665360	1.6853681	1.7435682	1.8067636	1.8744730	1.9274367	2.0988236
1999	72,600	30,469.84	1.5254927	1.5785652	1.5964032	1.6515312	1.7113907	1.7755259	1.8256939	1.9880337

(Continued)

Table 2.A8—Factors for indexing earnings in a benefit computation, 1951–2023—*Continued*

Year	Annual maximum taxable earnings (dollars)	Average annual wage [a] (dollars)	Factors for workers who were first eligible (attained age 62, became disabled, or died) in [b]—							
			2008	2009	2010	2011	2012	2013	2014	2015
2000	76,200	32,154.82	1.2020409	1.2565917	1.2854984	1.2661122	1.2960368	1.3366460	1.3783834	1.3960010
2001	80,400	32,921.92	1.1740327	1.2273124	1.2555455	1.2366110	1.2658384	1.3055013	1.3462663	1.3634733
2002	84,900	33,252.09	1.1623754	1.2151260	1.2430789	1.2243324	1.2532695	1.2925386	1.3328988	1.3499350
2003	87,000	34,064.95	1.1346387	1.1861306	1.2134164	1.1951173	1.2233639	1.2616960	1.3010931	1.3177228
2004	87,900	35,648.55	1.0842351	1.1334396	1.1595134	1.1420271	1.1690189	1.2056482	1.2432952	1.2591861
2005	90,000	36,952.94	1.0459631	1.0934307	1.1185841	1.1017150	1.1277541	1.1630904	1.1994085	1.2147385
2006	94,200	38,651.41	1.0000000	1.0453818	1.0694298	1.0533021	1.0781969	1.1119804	1.1467025	1.1613589
2007	97,500	40,405.48	1.0000000	1.0000000	1.0230041	1.0075764	1.0313905	1.0637074	1.0969222	1.1109424
2008	102,000	41,334.97	1.0000000	1.0000000	1.0000000	0.9849193	1.0081979	1.0397881	1.0722560	1.0859609
2009	106,800	40,711.61	1.0000000	1.0000000	1.0000000	1.0000000	1.0236350	1.0557089	1.0886740	1.1025887
2010	106,800	41,673.83	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0313333	1.0635372	1.0771307
2011	106,800	42,979.61	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0312255	1.0444059
2012	110,100	44,321.67	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0127813
2013	113,700	44,888.16	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2014	117,000	46,481.52	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2015	118,500	48,098.63	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2016	118,500	48,642.15	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2017	127,200	50,321.89	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2018	128,400	52,145.80	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2019	132,900	54,099.99	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2020	137,700	55,628.60	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2021	142,800	60,575.07	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2022	147,000	63,795.13	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2023	160,200	--	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000

(Continued)

Table 2.A8—Factors for indexing earnings in a benefit computation, 1951–2023—*Continued*

Year	Annual maximum taxable earnings (dollars)	Average annual wage [a] (dollars)	Factors for workers who were first eligible (attained age 62, became disabled, or died) in [b]—							
			2016	2017	2018	2019	2020	2021	2022	2023
2000	76,200	32,154.82	1.4455537	1.4958451	1.5127483	1.5649875	1.6217102	1.6824846	1.7300237	1.8838566
2001	80,400	32,921.92	1.4118715	1.4609910	1.4775004	1.5285223	1.5839234	1.6432817	1.6897131	1.8399616
2002	84,900	33,252.09	1.3978526	1.4464844	1.4628299	1.5133452	1.5681962	1.6269651	1.6729354	1.8216921
2003	87,000	34,064.95	1.3644969	1.4119683	1.4279237	1.4772336	1.5307758	1.5881424	1.6330158	1.7782228
2004	87,900	35,648.55	1.3038825	1.3492451	1.3644917	1.4116111	1.4627748	1.5175930	1.5604730	1.6992296
2005	90,000	36,952.94	1.2578572	1.3016185	1.3163269	1.3617831	1.4111408	1.4640240	1.5053904	1.6392490
2006	94,200	38,651.41	1.2025828	1.2444211	1.2584832	1.3019419	1.3491306	1.3996899	1.4392386	1.5672150
2007	97,500	40,405.48	1.1503766	1.1903987	1.2038503	1.2454224	1.2905626	1.3389270	1.3767588	1.4991796
2008	102,000	41,334.97	1.1245084	1.1636305	1.1767796	1.2174169	1.2615420	1.3088189	1.3457999	1.4654679
2009	106,800	40,711.61	1.1417264	1.1814475	1.1947980	1.2360575	1.2808582	1.3288590	1.3664063	1.4879065
2010	106,800	41,673.83	1.1153647	1.1541687	1.1672109	1.2075178	1.2512841	1.2981766	1.3348569	1.4535518
2011	106,800	42,979.61	1.0814784	1.1191035	1.1317495	1.1708317	1.2132683	1.2587362	1.2943021	1.4093909
2012	110,100	44,321.67	1.0487312	1.0852170	1.0974801	1.1353789	1.1765306	1.2206217	1.2551106	1.3667145
2013	113,700	44,888.16	1.0354962	1.0715215	1.0836298	1.1210504	1.1616827	1.2052174	1.2392711	1.3494665
2014	117,000	46,481.52	1.0000000	1.0347904	1.0464836	1.0826214	1.1218609	1.1639032	1.1967896	1.3032076
2015	118,500	48,098.63	1.0000000	1.0000000	1.0113001	1.0462229	1.0841431	1.1247720	1.1565527	1.2593928
2016	118,500	48,642.15	1.0000000	1.0000000	1.0000000	1.0345326	1.0720291	1.1122039	1.1436295	1.2453206
2017	127,200	50,321.89	1.0000000	1.0000000	1.0000000	1.0000000	1.0362449	1.0750787	1.1054553	1.2037519
2018	128,400	52,145.80	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0374755	1.0667897	1.1616481
2019	132,900	54,099.99	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0282553	1.1196873
2020	137,700	55,628.60	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0889195
2021	142,800	60,575.07	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2022	147,000	63,795.13	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2023	160,200	--	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000

SOURCES: Social Security Act of 1935 (the Act), as amended through December 31, 2022; regulations issued under the Act; and precedential case decisions (rulings). Social Security Administration, "Cost-of-Living Increase and Other Determinations for 2023," *Federal Register,* vol. 87, no. 204 (October 24, 2022). See the Social Security Program Rules page (https://www.ssa.gov/regulations/index.htm) for specific laws, regulations, rulings, legislation, and a link to the *Federal Register*.

NOTE: -- = not available.

a. National average wage levels. For years before 1978, average wages were determined from wages earned during the first quarter of the year and reported to the Social Security Administration (SSA) for Social Security tax purposes. These wages were then multiplied by 4 to obtain the average wage for the year. For 1973–1977 from data collected on all taxable wages reported to SSA; for 1957–1972, based on 1 percent statistical sample; for 1951–1956, based on 1/10 of 1 percent statistical sample. For 1978–1984, from wage data collected by the Internal Revenue Service during processing of annual tax returns. For years after 1984, from W-2 data processed by SSA. For years after 1977, the average wage amounts have been adjusted to be consistent with the pre-1978 series.

b. The indexing factor for a given year represents the ratio of the average annual wage for the second year before the year of first eligibility to the average annual wage for the year to be indexed. Multiplying a worker's covered earnings, up to the maximum taxable amounts for various years after 1951, by the indicated factors gives the indexed earnings. Earnings in the year before the year of first eligibility, and any earnings thereafter, are not indexed. The actual taxable earnings for those years are considered in calculating the average indexed monthly earnings (AIME).

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Table 2.A11.1—Legislative provisions addressing the computation of primary insurance amount (PIA) based on Windfall Elimination Provision (WEP), by year enacted

Year effective	Provision
	Enacted in 1983

1986 — Workers first eligible for pensions based on noncovered employment and disability or retired workers after December 31, 1985.[a] The benefit computation formula uses a reduced factor of the usual first average indexed monthly earnings (AIME) bend point.

Year eligible	Factor (percent)
1986	80
1987	70
1988	60
1989	50
1990 and later	40

WEP is not applicable to persons who were federal employees or nonprofit employees on January 1, 1984, and who were covered by Social Security on that date with no Civil Service Retirement System coverage; to persons with Railroad Retirement pensions; or to workers with 30 years of substantial Social Security earnings. Workers with 26–29 years of coverage have less than full WEP applied.[b] For benefits payable before January 1989:

Years of coverage	Factor (percent)
26	50
27	60
28	70
29	80

| | *Enacted in 1988* |

1989 — 5 percent added to factor for each year of coverage over 20.

Years of coverage	Factor (percent)
21	45
22	50
23	55
24	60
25	65
26	70
27	75
28	80
29	85

(Continued)

Table 2.A11.1—Legislative provisions addressing the computation of primary insurance amount (PIA) based on Windfall Elimination Provision (WEP), by year enacted—*Continued*

Year effective	Provision
	Enacted in 1988 (cont.)
1991	Earnings required for a year of substantial coverage (decoupled from the definition of a year of coverage for special minimum PIA).[b]

Year	Earnings (dollars)
1991	9,900
1992	10,350
1993	10,725
1994	11,250
1995	11,325
1996	11,625
1997	12,150
1998	12,675
1999	13,425
2000	14,175
2001	14,925
2002	15,750
2003	16,125
2004	16,275
2005	16,725
2006	17,475
2007	18,150
2008	18,975
2009	19,800
2010	19,800
2011	19,800
2012	20,475
2013	21,075
2014	21,750
2015	22,050
2016	22,050
2017	23,625
2018	23,850
2019	24,675
2020	25,575
2021	26,550
2022	27,300
2023	29,700

SOURCES: Social Security Act of 1935 (the Act), as amended through December 31, 2022; regulations issued under the Act; and precedential case decisions (rulings). Social Security Administration, "Cost-of-Living Increase and Other Determinations for 2023," *Federal Register,* vol. 87, no. 204 (October 24, 2022). See the Social Security Program Rules page (https://www.ssa.gov/regulations/index.htm) for specific laws, regulations, rulings, legislation, and a link to the *Federal Register*.

a. Reduction in PIA will not be greater than one-half the amount of the pension based on noncovered employment performed after 1956.

b. See Table 2.A12a. Before 1991, a year of substantial coverage for WEP was the same amount as for the minimum PIA (25 percent of the "old law" contribution and benefit base). For 1991 and following, a year of substantial coverage under WEP provisions remains 25 percent of the old law base, while the criterion for computing the special minimum PIA was changed to 15 percent of the base.

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Table 2.A17.1—Full retirement age (FRA) and maximum reduction of retired-worker benefits, by year of birth

Year of birth [a]	Year of attainment of age 62	FRA	Year of attainment of FRA	Maximum reduction months	Maximum reduction at age 62 [b]
1935	1997	65 years	2000	36	0.2000000
1936	1998	65 years	2001	36	0.2000000
1937	1999	65 years	2002	36	0.2000000
1938	2000	65 years and 2 months	2003 or 2004	38	0.2083333
1939	2001	65 years and 4 months	2004 or 2005	40	0.2166667
1940	2002	65 years and 6 months	2005 or 2006	42	0.2250000
1941	2003	65 years and 8 months	2006 or 2007	44	0.2333333
1942	2004	65 years and 10 months	2007 or 2008	46	0.2416667
1943–1954	2005–2016	66 years	2009–2020	48	0.2500000
1955	2017	66 years and 2 months	2021 or 2022	50	0.2583333
1956	2018	66 years and 4 months	2022 or 2023	52	0.2666667
1957	2019	66 years and 6 months	2023 or 2024	54	0.2750000
1958	2020	66 years and 8 months	2024 or 2025	56	0.2833333
1959	2021	66 years and 10 months	2025 or 2026	58	0.2916667
1960 or later	2022 and later	67 years	2027 and later	60	0.3000000

SOURCES: Social Security Act of 1935 (the Act), as amended through December 31, 2022; regulations issued under the Act; and precedential case decisions (rulings). See the Social Security Program Rules page (https://www.ssa.gov/regulations/index.htm) for specific laws, regulations, rulings, legislation, and a link to the *Federal Register.*

a. If birthday is January 1, refer to previous year.

b. The monthly reduction factor is 0.0055556 for the 36 months immediately preceding FRA and 0.0041667 for prior months.

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