
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 1944 through 1957. 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 2019, actual earnings in 1990 of \$20,000 are indexed to \$47,861.84, on the basis of 2017 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 to produce 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 2019 is 90 percent of the first \$926 of AIME; plus 32 percent of the next \$4,657; plus 15 percent of the AIME over \$5,583.
- *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 $\frac{5}{9}$ 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 $\frac{5}{12}$ of 1 percent per month. For a person aged 62 in 2019, the maximum reduction is 27.50 percent if the individual is entitled to benefits for all 54 months between ages 62 and 66 and 6 months.
- *To provide for price indexing after age 62.* Benefits are adjusted annually in December to reflect

increases in the Consumer Price Index (CPI-W).

The benefit increase in 2018 was 2.8 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 - Determining the Number of Computation Years

For workers born in the years 1944 through 1957, the number of computation years is 35.

Step 2 - 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 2019, the indexing year is 2017. The average annual wage for 2017 was \$50,321.89. The average annual wage for 1990 was \$21,027.98. The amount \$50,321.89 divided by \$21,027.98 yields a factor of 2.3930920.

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 2.3930920, result in indexed earnings of \$23,930.92; actual earnings of \$51,300 (the maximum creditable) result in indexed earnings of \$122,765.62.

Step 3 - 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 2019, 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 4 - 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 a formula to the AIME. The formula consists of brackets in which three percentages are applied to amounts of AIME. 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 PIA is rounded to the nearest lower 10 cents.

For retired workers who attained age 62 in 2019, the bend points are \$926 and \$5,583. Thus the formula is 90 percent of the first \$926 of AIME; plus 32 percent of the next \$4,657 of AIME; plus 15 percent of AIME above \$5,583. The following are examples of PIA computations for such workers with different AIME amounts.

Example 1 - AIME of \$700

PIA is \$630

Based on: 90 percent of \$700

Example 2 - AIME of \$1,500

PIA is \$1,017.08, rounded to \$1,017.00

Based on: 90 percent of \$926 (\$833.40); plus
32 percent of \$574 (\$183.68)

Example 3 - AIME of \$6,000

PIA is \$2,386.19, rounded to \$2,386.10

Based on: 90 percent of \$926 (\$833.40); plus
32 percent of \$4,657 (\$1,490.24); plus
15 percent of \$417 (\$62.55)

The above calculations are applicable to workers who attain age 62 in 2019. For workers who attained age 62 in prior years, the bend points will be different, and the PIA must be increased to reflect cost-of-living adjustments between the year of attainment of age 62 and 2019. Worksheet 2 shows cost-of-living increase factors for 2005 through 2019. After the PIA is calculated for the year of attainment of age 62, cost-of-living increases are applied for each year through 2018. The result is the current 2019 PIA.

For example, a worker who attained age 62 in 2016 would receive cost-of-living adjustments for the years 2016–2018. The adjustments are cumulative, with each

step rounded to the next lower dime. If the PIA at age 62 was \$700, the cost-of-living adjustments would be:

2016: \$700 multiplied by 1.003 = \$702.10

2017: \$702.10 multiplied by 1.020 = \$716.14, rounded to \$716.10

2018: \$716.10 multiplied by 1.028 = \$736.15, rounded to \$736.10

\$736.10 would be the PIA effective December 2018.

Step 5 - Computation of the Monthly Benefit

The full PIA is payable to a worker who retires 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 still retire as early as age 62, but the monthly benefit is reduced. The reduction is calculated as $\frac{5}{9}$ 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 $\frac{5}{12}$ of 1 percent per month. Workers attaining age 62 in 2019 have their benefits computed based on the FRA of 66 and 6 months. 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 exactly age 62 in 2019, the maximum reduction is 27.50 percent.

For example, in 2019 a worker with a PIA of \$700 would receive \$507 at age 62. The PIA is reduced by \$192.50, reflecting a reduction rate of $\frac{5}{9}$ of 1 percent for each of the first 36 months and a reduction rate of $\frac{5}{12}$ of 1 percent for each of the additional 18 months for a total reduction of 27.50 percent. After reduction of the PIA by \$192.50, the benefit amount is rounded down to the nearest lower dollar.

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 will gradually reach 8 percent per year ($\frac{16}{24}$ of 1 percent monthly) for those born 1943 and later. See Table 2.A20 for percentage increases.

For example, a worker born in June 1953 will reach FRA in June 2019. If the worker delays receiving benefits until November 2019 (5 months after FRA), his or her benefit will be 103.33% of the PIA. If the worker's PIA is \$700, his or her benefit would increase to \$723.31, rounded to \$723.30.

Instructions for computing a retired-worker benefit (only for workers attaining age 62 in years 2006–2019)

STEP 1.—Determining the Number of Computation Years		
1	Number of Computation Years.	35
STEP 2.—Indexing of Earnings (Use Worksheet 1 for Steps 2 and 3.)		
2	Enter in column 2 your earnings in each year 1958 through 2018. If none, enter “0.”	
3	Column 3 contains the maximum earnings creditable under Social Security for each year.	
4	Enter in column 4 the lower amount from columns 2 or 3 for each year.	
5	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 2004–2019.)	
6	Multiply column 4 by column 5 and enter results in column 6 in dollars and cents. These are your indexed earnings.	
STEP 3.—Computing the Average Indexed Monthly Earnings (AIME)		
7	Enter the number of computation years from line 1.	35
8	Place an “X” in column 7 next to each of the 35 highest indexed earnings entries.	
9	Add all individual indexed earnings marked with an “X.”	
10	Number of months in the computation period.	420
11	Divide line 9 by line 10.	
12	Round the result in line 11 to the next lower dollar. This is your average indexed monthly earnings (AIME).	
STEP 4.—Computing the Primary Insurance Amount (PIA) (Use Worksheet 2 for Step 4.)		
13	Enter first bend point from Worksheet 2 based on year of attainment of age 62. (If your birthday is January 1, enter prior year.)	
14	Enter second bend point from Worksheet 2.	
15	If your AIME (obtained in line 12) is equal to or less than line 13, complete line 16, otherwise skip to line 17.	
16	Multiply line 12 by 0.9. (If you receive a pension on the basis of noncovered employment, see Table 2.A11.1.) Round to next lower dime to obtain your PIA at age 62. Continue with line 26.	
17	If your AIME (obtained in line 12) is greater than line 13 but less than or equal to line 14, complete lines 18–20, otherwise skip to line 21.	
18	Multiply line 13 by 0.9. (If you receive a pension on the basis of noncovered employment, see Table 2.A11.1.)	
19	Subtract line 13 from line 12 then multiply by 0.32.	
20	Add line 18 to line 19, and round to next lower dime to obtain your PIA at age 62. Continue with line 26.	
21	If your AIME (obtained in line 12) is greater than line 14, complete lines 22–25.	
22	Multiply line 13 by 0.9. (If you receive a pension on the basis of noncovered employment, see Table 2.A11.1.)	
23	Subtract line 13 from line 14 then multiply by 0.32.	
24	Subtract line 14 from line 12 then multiply by 0.15.	
25	Add lines 22, 23, and 24, and round to the next lower dime to obtain your PIA at age 62. Continue with line 26.	
26	If you attained age 62 in 2019, skip to line 32. Otherwise you will need to adjust your PIA to reflect cost-of-living adjustments (COLAs) from the year you attained age 62 through 2018 by using lines 27–31 and Worksheet 2.	
27	Enter year of attainment of age 62.	
28	Place an “X” corresponding to the year you attained age 62 in column 5 (Worksheet 2).	
29	Place an “X” in column 5 (Worksheet 2) next to each subsequent year through 2018.	
30	Enter your PIA at age 62 from either line 16, 20, or 25—here and in the first row of column 6 (Worksheet 2).	
31	Beginning with first year marked, multiply your PIA at age 62 by the corresponding factor (column 4), round to the next lower dime, and enter in column 6. The resulting PIA is then multiplied by the next factor and is again rounded to the next lower dime. Continue this process through 2018. Enter this last figure, which is your current PIA.	

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Instructions for computing a retired-worker benefit (only for workers attaining age 62 in years 2006–2019)—Continued

STEP 5.—Computing the Monthly Benefit

32	Enter your current PIA from either line 16, 20, 25, or 31.	
33	Using Table 2.A17.1, determine your full retirement age and enter here.	
34	If you retired at your full retirement age, round the PIA from line 32 to the next lower dollar to obtain your monthly benefit. If you retired before the full retirement age, skip to line 35. If you retired after the full retirement age, skip to line 45.	
35	If you retired before the full retirement age, enter your age at retirement in years and months, and complete lines 36–44.	
36	Subtract line 35 from line 33, and convert the result to months to determine the total number of reduction months.	
37	If line 36 is greater than 36 reduction months, subtract 36 months and enter the result here.	
38	“0.0055556” (the decimal equivalent of $\frac{5}{9}$ of 1 percent—the monthly reduction factor for the first 36 months) has been entered.	0.0055556
39	“0.0041667” (the decimal equivalent of $\frac{5}{12}$ of 1 percent—the monthly reduction factor for months above 36) has been entered.	0.0041667
40	Multiply line 36 (but not more than 36 months) by line 38 to obtain the percent reduction for the first 36 months.	
41	Multiply line 37 by line 39 to obtain the percent reduction for months in excess of 36.	
42	Add line 40 to line 41 to obtain the total percent reduction.	
43	Multiply line 32 by line 42 to obtain the amount of benefit reduction.	
44	Subtract line 43 from line 32, and round to the next lower dollar to obtain your monthly benefit.	
45	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 46–50. If you worked (or plan to work) after attaining age 70, enter “70 years 0 months.”	
46	Subtract line 33 from line 45, and convert the result to months to determine the total number of delayed months.	
47	“0.006667” (the decimal equivalent of $\frac{16}{24}$ of 1 percent—the monthly percentage increase for persons born 1943 or later) has been entered.	0.006667
48	Multiply line 46 by line 47 to obtain the total percent increase.	
49	Multiply line 32 by line 48 to obtain the amount of benefit increase.	
50	Add line 32 to line 49, and round to the next lower dollar to obtain your monthly benefit.	

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
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				
1988		45,000				
1989		48,000				
1990		51,300				

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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
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				

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

	1st bend point (\$)	2nd bend point (\$)	Cost-of-living increase (%)	Cost-of-living factor	Years aged 62 or older	PIA (\$)
Year	1	2	3	4	5	6
					Age 62 PIA:	
2005	627	3,779	4.1	1.041		
2006	656	3,955	3.3	1.033		
2007	680	4,100	2.3	1.023		
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		

NOTE: ... = not applicable.

CONTACT: (410) 965-0090 or statistics@ssa.gov.

2.A OASDI: Benefit Computation and Automatic Adjustments

Table 2.A8—Factors for indexing earnings, 1951–2019

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 —							
			2004	2005	2006	2007	2008	2009	2010	2011
1951	3,600	2,799.16	11.8793102	12.1697045	12.7354456	13.2014390	13.8082175	14.4348590	14.7669194	14.5442240
1952	3,600	2,973.32	11.1834885	11.4568731	11.9894764	12.4281746	12.9994114	13.5893479	13.9019581	13.6923069
1953	3,600	3,139.44	10.5917265	10.8506453	11.3550665	11.7705514	12.3115619	12.8702826	13.1663513	12.9677936
1954	3,600	3,155.64	10.5373522	10.7949418	11.2967734	11.7101254	12.2483585	12.8042109	13.0987597	12.9012213
1955	4,200	3,301.44	10.0719959	10.3182096	10.7978791	11.1929764	11.7074398	12.2387443	12.5202851	12.3314705
1956	4,200	3,532.36	9.4135620	9.6436801	10.0919923	10.4612610	10.9420925	11.4386642	11.7017999	11.5253287
1957	4,200	3,641.72	9.1308750	9.3540827	9.7889322	10.1471118	10.6135041	11.0951638	11.3503976	11.1792258
1958	4,200	3,673.80	9.0511432	9.2724019	9.7034542	10.0585062	10.5208258	10.9982797	11.2512848	11.0816076
1959	4,800	3,855.80	8.6239146	8.8347295	9.2454354	9.5837284	10.0242258	10.4791431	10.7202059	10.5585378
1960	4,800	4,007.12	8.2982516	8.5011055	8.8963021	9.2218202	9.6456832	10.0834215	10.3153811	10.1598180
1961	4,800	4,086.76	8.1365409	8.3354418	8.7229370	9.0421116	9.4577147	9.8869226	10.1143620	9.9618304
1962	4,800	4,291.40	7.7485413	7.9379573	8.3069744	8.6109288	9.0067134	9.4154542	9.6320478	9.4867899
1963	4,800	4,396.64	7.5630686	7.7479507	8.1081348	8.4048137	8.7911246	9.1900815	9.4014907	9.2597097
1964	4,800	4,576.32	7.2661199	7.4437430	7.7897852	8.0748156	8.4459588	8.8292515	9.0323601	8.8961458
1965	4,800	4,658.72	7.1376022	7.3120836	7.6520053	7.9319942	8.2965729	8.6730862	8.8726023	8.7387974
1966	6,600	4,938.36	6.7334277	6.8980289	7.2187022	7.4828364	7.8267704	8.1819632	8.3701816	8.2439535
1967	6,600	5,213.44	6.3781476	6.5340639	6.8378173	7.0880148	7.4138016	7.7502532	7.9285405	7.8089726
1968	7,800	5,571.76	5.9679688	6.1138581	6.3980771	6.6321844	6.9370199	7.2518342	7.4186559	7.3067774
1969	7,800	5,893.76	5.6419145	5.7798332	6.0485242	6.2698413	6.5580224	6.8556371	7.0133446	6.9075785
1970	7,800	6,186.24	5.3751697	5.5065678	5.7625553	5.9734087	6.2479648	6.5315086	6.6817598	6.5809943
1971	7,800	6,497.08	5.1180053	5.2431169	5.4868572	5.6876227	5.9490433	6.2190215	6.3620842	6.2661396
1972	9,000	7,133.80	4.6612030	4.7751479	4.9971334	5.1799798	5.4180675	5.6639491	5.7942429	5.7068617
1973	10,800	7,580.16	4.3867267	4.4939619	4.7028757	4.8749551	5.0990230	5.3304257	5.4530472	5.3708114
1974	13,200	8,030.76	4.1405907	4.2418090	4.4390008	4.6014250	4.8129206	5.0313395	5.1470807	5.0694592
1975	14,100	8,630.92	3.8526704	3.9468504	4.1303303	4.2814601	4.4782491	4.6814801	4.7891731	4.7169491
1976	15,300	9,226.48	3.6039844	3.6920852	3.8637216	4.0050962	4.1891827	4.3792952	4.4800368	4.4124747
1977	16,500	9,779.44	3.4002039	3.4833232	3.6452547	3.7786356	3.9523132	4.1316763	4.2267216	4.1629797
1978	17,700	10,556.03	3.1500564	3.2270607	3.3770793	3.5006475	3.6615479	3.8277155	3.9157685	3.8567160
1979	22,900	11,479.46	2.8966598	2.9674697	3.1054205	3.2190486	3.3670059	3.5198067	3.6007765	3.5464743
1980	25,900	12,513.46	2.6573058	2.7222647	2.8488164	2.9530554	3.0887868	3.2289615	3.3032407	3.2534255
1981	29,700	13,773.10	2.4142778	2.4732958	2.5882735	2.6829791	2.8062971	2.9336518	3.0011377	2.9558785
1982	32,400	14,531.34	2.2883017	2.3442401	2.4532184	2.5429823	2.6598655	2.7805750	2.8445395	2.8016418
1983	35,700	15,239.24	2.1820045	2.2353444	2.3392604	2.4248545	2.5363082	2.6514104	2.7124036	2.6714987
1984	37,800	16,135.07	2.0608581	2.1112366	2.2093830	2.2902250	2.3954907	2.5042023	2.5618092	2.5231753
1985	39,600	16,822.51	1.9766426	2.0249624	2.1190982	2.1966365	2.2976007	2.4018699	2.4571226	2.4200675
1986	42,000	17,321.82	1.9196649	1.9665918	2.0580141	2.1333174	2.2313712	2.3326348	2.3862949	2.3503079
1987	43,800	18,426.51	1.8045788	1.8486925	1.9346339	2.0054226	2.0975980	2.1927907	2.2432338	2.2094043
1988	45,000	19,334.04	1.7198728	1.7619158	1.8438231	1.9112891	1.9991378	2.0898622	2.1379375	2.1056960
1989	48,000	20,099.55	1.6543699	1.6948116	1.7735994	1.8384959	1.9229988	2.0102679	2.0565122	2.0254986
1990	51,300	21,027.98	1.5813259	1.6199820	1.6952912	1.7573224	1.8380943	1.9215103	1.9657128	1.9360685
1991	53,400	21,811.60	1.5245140	1.5617813	1.6343849	1.6941875	1.7720575	1.8524767	1.8950911	1.8665119
1992	55,500	22,935.42	1.4498139	1.4852551	1.5543012	1.6111735	1.6852279	1.7617066	1.8022330	1.7750540
1993	57,600	23,132.67	1.4374514	1.4725905	1.5410478	1.5974351	1.6708581	1.7466847	1.7868655	1.7599183
1994	60,600	23,753.53	1.3998799	1.4341005	1.5007685	1.5556820	1.6271859	1.7010305	1.7401611	1.7139183
1995	61,200	24,705.66	1.3459300	1.3788318	1.4429305	1.4957277	1.5644759	1.6354746	1.6730972	1.6478657
1996	62,700	25,913.90	1.2831758	1.3145435	1.3756536	1.4259891	1.4915320	1.5592203	1.5950887	1.5710337
1997	65,400	27,426.00	1.2124294	1.2420677	1.2998086	1.3473689	1.4092981	1.4732546	1.5071454	1.4844166
1998	68,400	28,861.44	1.1521286	1.1802928	1.2351619	1.2803568	1.3392059	1.3999814	1.4321867	1.4105883
1999	72,600	30,469.84	1.0913116	1.1179891	1.1699618	1.2127711	1.2685137	1.3260811	1.3565864	1.3361281

(Continued)

2.A OASDI: Benefit Computation and Automatic Adjustments

Table 2.A8—Factors for indexing earnings, 1951–2019—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 —							
			2012	2013	2014	2015	2016	2017	2018	2019
1951	3,600	2,799.16	14.8879771	15.3544671	15.8339180	16.0362966	16.6055245	17.1832371	17.3774097	17.9774968
1952	3,600	2,973.32	14.0159250	14.4550906	14.9064581	15.0969825	15.6328683	16.1767418	16.3595408	16.9244784
1953	3,600	3,139.44	13.2742878	13.6902155	14.1176993	14.2981423	14.8056723	15.3207674	15.4938938	16.0289383
1954	3,600	3,155.64	13.2061420	13.6199345	14.0452238	14.2247405	14.7296650	15.2421157	15.4143533	15.9466511
1955	4,200	3,301.44	12.6229251	13.0184435	13.4249509	13.5965397	14.0791655	14.5689850	14.7336162	15.2424063
1956	4,200	3,532.36	11.7977301	12.1673923	12.5473253	12.7076968	13.1587720	13.6165708	13.7704396	14.2459687
1957	4,200	3,641.72	11.4434471	11.8020084	12.1705321	12.3260877	12.7636172	13.2076684	13.3569165	13.8181656
1958	4,200	3,673.80	11.3435217	11.6989520	12.0642577	12.2184550	12.6521640	13.0923376	13.2402825	13.6975039
1959	4,800	3,855.80	10.8080891	11.1467426	11.4948052	11.6417242	12.0549614	12.4743581	12.6153198	13.0509596
1960	4,800	4,007.12	10.3999456	10.7258106	11.0607294	11.2021003	11.5997325	12.0032916	12.1389302	12.5581190
1961	4,800	4,086.76	10.1972785	10.5167933	10.8451854	10.9838013	11.3736848	11.7693797	11.9023750	12.3133950
1962	4,800	4,291.40	9.7110104	10.0152887	10.3280212	10.4600270	10.8313185	11.2081442	11.3347975	11.7262176
1963	4,800	4,396.64	9.4785632	9.7755582	10.0808049	10.2096510	10.5720550	10.9398609	11.0634826	11.4455334
1964	4,800	4,576.32	9.1064065	9.3917405	9.6850024	9.8087896	10.1569645	10.5103293	10.6290972	10.9961476
1965	4,800	4,658.72	8.9453391	9.2256264	9.5137012	9.6352990	9.9773157	10.3244303	10.4410976	10.8016558
1966	6,600	4,938.36	8.4387995	8.7032152	8.9749775	9.0896897	9.4123393	9.7397982	9.8498591	10.1900003
1967	6,600	5,213.44	7.9935379	8.2440020	8.5014252	8.6100847	8.9157102	9.2258912	9.3301448	9.6523390
1968	7,800	5,571.76	7.4794733	7.7138301	7.9546983	8.0563700	8.3423407	8.6325739	8.7301230	9.0315968
1969	7,800	5,893.76	7.0708393	7.2923923	7.5201009	7.6162178	7.8865648	8.1609414	8.2531610	8.5381641
1970	7,800	6,186.24	6.7365362	6.9476144	7.1645571	7.2561297	7.5136949	7.7750993	7.8629588	8.1344872
1971	7,800	6,497.08	6.4142399	6.6152195	6.8217830	6.9089745	7.1542170	7.4031149	7.4867710	7.7453087
1972	9,000	7,133.80	5.8417435	6.0247848	6.2129118	6.2923211	6.5156747	6.7423575	6.8185469	7.0540091
1973	10,800	7,580.16	5.4977507	5.6700136	5.8470626	5.9217958	6.1319972	6.3453318	6.4170347	6.6386316
1974	13,200	8,030.76	5.1892760	5.3518733	5.5189882	5.5895283	5.7879354	5.9892999	6.0569797	6.2661429
1975	14,100	8,630.92	4.8284343	4.9797252	5.1352197	5.2008546	5.3854653	5.5728277	5.6358013	5.8304202
1976	15,300	9,226.48	4.5167637	4.6582890	4.8037464	4.8651447	5.0378389	5.2131073	5.2720160	5.4540724
1977	16,500	9,779.44	4.2613718	4.3948948	4.5321276	4.5900542	4.7529838	4.9183420	4.9739198	5.1456822
1978	17,700	10,556.03	3.9478696	4.0715695	4.1987063	4.2523714	4.4033145	4.5565075	4.6079966	4.7671227
1979	22,900	11,479.46	3.6302953	3.7440446	3.8609543	3.9103024	4.0491034	4.1899732	4.2373204	4.3836461
1980	25,900	12,513.46	3.3303203	3.4346703	3.5419197	3.5871901	3.7145218	3.8437514	3.8871863	4.0214209
1981	29,700	13,773.10	3.0257408	3.1205473	3.2179880	3.2591181	3.3748045	3.4922153	3.5316777	3.6536357
1982	32,400	14,531.34	2.8678587	2.9577183	3.0500745	3.0890585	3.1987084	3.3099927	3.3473960	3.4629903
1983	35,700	15,239.24	2.7346397	2.8203250	2.9083911	2.9455642	3.0501206	3.1562355	3.1919013	3.3021260
1984	37,800	16,135.07	2.5828106	2.6637387	2.7469153	2.7820245	2.8807759	2.9809992	3.0146848	3.1187897
1985	39,600	16,822.51	2.4772659	2.5548869	2.6346645	2.6683390	2.7630550	2.8591827	2.8914918	2.9913426
1986	42,000	17,321.82	2.4058575	2.4812410	2.5587190	2.5914228	2.6834086	2.7767654	2.8081431	2.9051156
1987	43,800	18,426.51	2.2616236	2.3324878	2.4053209	2.4360641	2.5225352	2.6102952	2.6397918	2.7309507
1988	45,000	19,334.04	2.1554641	2.2230020	2.2924164	2.3217165	2.4041287	2.4877692	2.5158813	2.6027612
1989	48,000	20,099.55	2.0733713	2.1383369	2.2051076	2.2332918	2.3125652	2.3930202	2.4200616	2.5036327
1990	51,300	21,027.98	1.9818275	2.0439248	2.1077474	2.1346872	2.2104605	2.2873633	2.3132108	2.3930920
1991	53,400	21,811.60	1.9106269	1.9704932	2.0320229	2.0579948	2.1310459	2.2051858	2.2301046	2.3071159
1992	55,500	22,935.42	1.8170075	1.8739404	1.9324551	1.9571545	2.0266261	2.0971332	2.1208310	2.1940688
1993	57,600	23,132.67	1.8015140	1.8579615	1.9159773	1.9404660	2.0093452	2.0792511	2.1027469	2.1753602
1994	60,600	23,753.53	1.7544268	1.8093989	1.8658982	1.8897469	1.9568258	2.0249045	2.0477862	2.1185015
1995	61,200	24,705.66	1.6868131	1.7396665	1.7939885	1.8169181	1.8814118	1.9468668	1.9688666	2.0368567
1996	62,700	25,913.90	1.6081651	1.6585543	1.7103435	1.7322040	1.7936906	1.8560938	1.8770679	1.9418879
1997	65,400	27,426.00	1.5195008	1.5671119	1.6160457	1.6367009	1.6947976	1.7537603	1.7735780	1.8348243
1998	68,400	28,861.44	1.4439276	1.4891707	1.5356708	1.5552987	1.6105059	1.6665360	1.6853681	1.7435682
1999	72,600	30,469.84	1.3677075	1.4105624	1.4546079	1.4731997	1.5254927	1.5785652	1.5964032	1.6515312

(Continued)

2.A OASDI: Benefit Computation and Automatic Adjustments

Table 2.A8—Factors for indexing earnings, 1951–2019—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 —							
			2004	2005	2006	2007	2008	2009	2010	2011
2000	76,200	32,154.82	1.0341246	1.0594042	1.1086534	1.1492193	1.2020409	1.2565917	1.2854984	1.2661122
2001	80,400	32,921.92	1.0100289	1.0347194	1.0828211	1.1224418	1.1740327	1.2273124	1.2555455	1.2366110
2002	84,900	33,252.09	1.0000000	1.0244454	1.0720695	1.1112968	1.1623754	1.2151260	1.2430789	1.2243324
2003	87,000	34,064.95	1.0000000	1.0000000	1.0464877	1.0847789	1.1346387	1.1861306	1.2134164	1.1951173
2004	87,900	35,648.55	1.0000000	1.0000000	1.0000000	1.0365903	1.0842351	1.1334396	1.1595134	1.1420271
2005	90,000	36,952.94	1.0000000	1.0000000	1.0000000	1.0000000	1.0459631	1.0934307	1.1185841	1.1017150
2006	94,200	38,651.41	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0453818	1.0694298	1.0533021
2007	97,500	40,405.48	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0230041	1.0075764
2008	102,000	41,334.97	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	0.9849193
2009	106,800	40,711.61	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2010	106,800	41,673.83	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2011	106,800	42,979.61	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
2012	110,100	44,321.67	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000
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	--	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000

(Continued)

2.A OASDI: Benefit Computation and Automatic Adjustments

Table 2.A8—Factors for indexing earnings, 1951–2019—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 —							
			2012	2013	2014	2015	2016	2017	2018	2019
2000	76,200	32,154.82	1.2960368	1.3366460	1.3783834	1.3960010	1.4455537	1.4958451	1.5127483	1.5649875
2001	80,400	32,921.92	1.2658384	1.3055013	1.3462663	1.3634733	1.4118715	1.4609910	1.4775004	1.5285223
2002	84,900	33,252.09	1.2532695	1.2925386	1.3328988	1.3499350	1.3978526	1.4464844	1.4628299	1.5133452
2003	87,000	34,064.95	1.2233639	1.2616960	1.3010931	1.3177228	1.3644969	1.4119683	1.4279237	1.4772336
2004	87,900	35,648.55	1.1690189	1.2056482	1.2432952	1.2591861	1.3038825	1.3492451	1.3644917	1.4116111
2005	90,000	36,952.94	1.1277541	1.1630904	1.1994085	1.2147385	1.2578572	1.3016185	1.3163269	1.3617831
2006	94,200	38,651.41	1.0781969	1.1119804	1.1467025	1.1613589	1.2025828	1.2444211	1.2584832	1.3019419
2007	97,500	40,405.48	1.0313905	1.0637074	1.0969222	1.1109424	1.1503766	1.1903987	1.2038503	1.2454224
2008	102,000	41,334.97	1.0081979	1.0397881	1.0722560	1.0859609	1.1245084	1.1636305	1.1767796	1.2174169
2009	106,800	40,711.61	1.0236350	1.0557089	1.0886740	1.1025887	1.1417264	1.1814475	1.1947980	1.2360575
2010	106,800	41,673.83	1.0000000	1.0313333	1.0635372	1.0771307	1.1153647	1.1541687	1.1672109	1.2075178
2011	106,800	42,979.61	1.0000000	1.0000000	1.0312255	1.0444059	1.0814784	1.1191035	1.1317495	1.1708317
2012	110,100	44,321.67	1.0000000	1.0000000	1.0000000	1.0127813	1.0487312	1.0852170	1.0974801	1.1353789
2013	113,700	44,888.16	1.0000000	1.0000000	1.0000000	1.0000000	1.0354962	1.0715215	1.0836298	1.1210504
2014	117,000	46,481.52	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0347904	1.0464836	1.0826214
2015	118,500	48,098.63	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0113001	1.0462229
2016	118,500	48,642.15	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0000000	1.0345326
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	--	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, 2018; regulations issued under the Act; and precedential case decisions (rulings). Social Security Administration, "Cost-of-Living Increase and Other Determinations for 2019," *Federal Register*, vol. 83, no. 206 (October 24, 2018). 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).

CONTACT: (410) 965-0090 or statistics@ssa.gov.

2.A OASDI: Benefit Computation and Automatic Adjustments

Table 2.A11.1—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.																				
	<table> <thead> <tr> <th style="text-align: left;"><i>Year eligible</i></th> <th style="text-align: left;"><i>Factor (percent)</i></th> </tr> </thead> <tbody> <tr><td>1986</td><td>80</td></tr> <tr><td>1987</td><td>70</td></tr> <tr><td>1988</td><td>60</td></tr> <tr><td>1989</td><td>50</td></tr> <tr><td>1990 and later</td><td>40</td></tr> </tbody> </table>	<i>Year eligible</i>	<i>Factor (percent)</i>	1986	80	1987	70	1988	60	1989	50	1990 and later	40								
<i>Year eligible</i>	<i>Factor (percent)</i>																				
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:																				
	<table> <thead> <tr> <th style="text-align: left;"><i>Years of coverage</i></th> <th style="text-align: left;"><i>Factor (percent)</i></th> </tr> </thead> <tbody> <tr><td>26</td><td>50</td></tr> <tr><td>27</td><td>60</td></tr> <tr><td>28</td><td>70</td></tr> <tr><td>29</td><td>80</td></tr> </tbody> </table>	<i>Years of coverage</i>	<i>Factor (percent)</i>	26	50	27	60	28	70	29	80										
<i>Years of coverage</i>	<i>Factor (percent)</i>																				
26	50																				
27	60																				
28	70																				
29	80																				
	Enacted in 1988																				
1989	5 percent added to factor for each year of coverage over 20.																				
	<table> <thead> <tr> <th style="text-align: left;"><i>Years of coverage</i></th> <th style="text-align: left;"><i>Factor (percent)</i></th> </tr> </thead> <tbody> <tr><td>21</td><td>45</td></tr> <tr><td>22</td><td>50</td></tr> <tr><td>23</td><td>55</td></tr> <tr><td>24</td><td>60</td></tr> <tr><td>25</td><td>65</td></tr> <tr><td>26</td><td>70</td></tr> <tr><td>27</td><td>75</td></tr> <tr><td>28</td><td>80</td></tr> <tr><td>29</td><td>85</td></tr> </tbody> </table>	<i>Years of coverage</i>	<i>Factor (percent)</i>	21	45	22	50	23	55	24	60	25	65	26	70	27	75	28	80	29	85
<i>Years of coverage</i>	<i>Factor (percent)</i>																				
21	45																				
22	50																				
23	55																				
24	60																				
25	65																				
26	70																				
27	75																				
28	80																				
29	85																				

(Continued)																					

2.A OASDI: Benefit Computation and Automatic Adjustments

Table 2.A11.1—Computation of primary insurance amount (PIA) based on Windfall Elimination Provision (WEP), by year enacted—Continued

Year effective	Provision
	<i>Enacted in 1988 (cont.)</i>
1991	Earnings required for a year of substantial coverage (decoupled from the definition of a year of coverage for special minimum PIA). ^b
	<i>Year</i> <i>Earnings (dollars)</i>
	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

SOURCES: Social Security Act of 1935 (the Act), as amended through December 31, 2018; regulations issued under the Act; and precedential case decisions (rulings). Social Security Administration, "Cost-of-Living Increase and Other Determinations for 2019," *Federal Register*, vol. 83, no. 206 (October 24, 2018). 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.

CONTACT: (410) 965-0090 or statistics@ssa.gov.

2.A OASDI: Benefit Computation and Automatic Adjustments

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

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

SOURCES: Social Security Act of 1935 (the Act), as amended through December 31, 2018; 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 full retirement age and 0.0041667 for prior months.

CONTACT: (410) 965-0090 or statistics@ssa.gov.