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Social Security: Benefit Calculation

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Social Security: Benefit Calculation

Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI), commonly referred to on a combined basis as OASDI, are social insurance programs that protect insured workers and their family members against loss of income due to old age, disability, or death. These programs are often referred to as Social Security. Monthly Social Security benefit amounts are determined by federal law. Most Social Security beneficiaries are retired or disabled workers whose monthly benefits depend on their past earnings, the age at which they claimed benefits, and other factors. Benefits are also paid to workers' dependents and survivors based on the earnings of the insured workers.

The computation process involves three main steps:

1. First, a summarized measure of lifetime Social Security–covered earnings is computed. That measure is called the *average indexed monthly earnings* (AIME).
2. Second, a progressive benefit formula is applied to the AIME to compute the *primary insurance amount* (PIA). The benefit formula is progressive. As a result, workers with higher AIMEs receive higher Social Security benefits, with benefits received by people with lower earnings replacing a larger share of career-average earnings.
3. Third, an adjustment may be made based on the age at which a beneficiary chooses to begin receiving benefits. For retired workers who claim benefits at the full retirement age (FRA) and for disabled workers, the monthly benefit equals the PIA. Retired workers who claim earlier than the FRA receive monthly benefits lower than the PIA (i.e., an actuarial reduction), and those who claim later than the FRA receive benefits higher than the PIA (i.e., a delayed retirement credit).

Retired-worker benefits can be affected by other adjustments. For example, the *windfall elimination provision* can reduce benefits for individuals who receive a pension based on employment not covered by Social Security, and benefits can be temporarily withheld under the *retirement earnings test* if a beneficiary under the FRA continues to work and earns above a certain amount. Although not an adjustment, income tax can affect Social Security benefits and thus the beneficiary's net income.

Benefits for eligible dependents and survivors are based on the worker's PIA. For example, a dependent spouse can receive a benefit equal to 50% of the worker's PIA, and a widow(er) can receive a benefit equal to 100% of the worker's PIA. Dependent benefits may also be adjusted based on the age at which they are claimed and other factors.

In October 2021, there were approximately 65.2 million Social Security beneficiaries collecting an average monthly benefit of \$1,442. Retired-worker and disabled-worker beneficiaries accounted for 84.5% of the beneficiary population. The largest single category of beneficiaries was retired workers (72.3%), with an average monthly benefit of \$1,563. The second-largest category was disabled workers (12.2%), with an average monthly benefit of \$1,282. Family members of retired, disabled, or deceased workers accounted for the remainder of the beneficiary population (15.5%). The Social Security Administration's Office of the Chief Actuary estimates that about 94% of workers (176 million) are covered under the OASDI programs. Because of the number of people receiving benefits, the number of people expected to receive benefits, and the program's projected long-term financial imbalance, there has been some congressional interest in making changes to the benefit formula.

Contents

Introduction	1
Eligibility and Insured Status	2
Insured Status	2
Amount Needed to Earn Credits	3
Average Index Monthly Earnings.....	3
Wage Indexing	3
Number of Years	4
AIME for Hypothetical Workers Born in 1952.....	4
Primary Insurance Amount.....	5
PIA for Hypothetical Workers Born in 1952.....	5
Benefit Amounts.....	6
Age	6
Adjustments for Early and Late Benefit Claim.....	7
Cost-of-Living Adjustments.....	8
Benefit Amounts for Hypothetical Workers Born in 1952.....	8
Features of the Benefit Formula	9
Auxiliary Benefits	11
Maximum Family Benefits	12
Other Adjustments to Benefits.....	12

Figures

Figure A-1. Scaled Factors by Hypothetical Earnings Level and Age	14
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Tables

Table 1. Total Wage-Indexed Earnings and Average Indexed Monthly Earnings (AIME) for Hypothetical Workers Born in 1952, by Earnings Level	4
Table 2. Computation of Primary Insurance Amounts (PIAs) for Hypothetical Workers Born in 1952, by Earnings Levels	6
Table 3. Full Retirement Age (FRA) by Year of Birth	6
Table 4. Monthly Benefit Amounts for Hypothetical Workers Born in 1952, by Earnings Level at Claiming Age.....	9
Table 5. Wage-Indexed Earnings, Average Indexed Monthly Earnings (AIMEs), and Primary Insurance Amounts (PIAs) for Hypothetical Earners Born in 1952, by Earnings Level and Years of Earnings.....	10
Table A-1. Distribution of Average-Indexed Monthly Earnings (AIMEs) of Actual Workers Retiring in Years 2015-2020, Relative to AIMEs for Hypothetical Workers Retiring in 2020.....	15

Table A-2. Hypothetical Wages for 1952 Birth Cohort by Earnings Level	16
Table A-3. Wage-Indexed Hypothetical Wages for 1952 Birth Cohort by Earnings Level	17
Table B-1. Parameters Used to Calculate Social Security Eligibility and Benefits, Select Years.....	20
Table B-2. Social Security Benefit Amounts, Full Retirement Age (FRA), and Delayed Retirement Credits (DRCs) by Birth Year	22
Table C-1. Social Security Benefits for the Worker’s Family Members	24

Appendixes

Appendix A. Hypothetical Workers, Wages, and Indexed Wages	14
Appendix B. Social Security Program Information.....	20
Appendix C. Auxiliary Benefits	24

Contacts

Author Information.....	26
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Introduction

Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI), commonly referred to on a combined basis as OASDI, are social insurance programs that protect insured workers and their family members against loss of income due to old age, disability, or death. These programs are often referred to as Social Security. Most Social Security beneficiaries are retired or disabled workers whose monthly benefits depend on their past earnings, their age, and other factors. Benefits are also paid to workers' dependents and survivors based on the earnings of the insured workers.

Social Security has a significant impact on beneficiaries, both young and old, in terms of income support and poverty reduction.¹ Under current law, Social Security's revenues are projected to be insufficient to pay full scheduled benefits after 2034.² For both of those reasons, Social Security is of ongoing interest to policymakers. Most proposals to change Social Security would change the benefit computation rules. Evaluating such proposals requires an understanding of how benefits are computed under current law.

This report provides several examples of how benefits are computed under current law. To help illustrate the benefit formula, this report makes use of *hypothetical earners*. Wages for hypothetical earners are expressed at each age as a percent of the Social Security Administration's (SSA's) Average Wage Index (AWI).³ Throughout this report, examples of benefit calculations are shown for very low, low, medium, and high lifetime hypothetical earners as well as *maximum earners*.⁴ This technique demonstrates how Social Security benefits are computed under current law, how career earnings affect benefit levels, and how program changes may affect beneficiaries. In addition, this technique illustrates how indexed parameters that change year to year affect benefit amounts. **Appendix A** provides more details, including distributional information, on wages of hypothetical earners born in 1952. This year is chosen simply because it is the youngest

¹ Research suggests that Social Security benefits accounted for most of the decline in poverty from 1967 through 2000. For more information, see CRS Report R45791, *Poverty Among the Population Aged 65 and Older*.

² Social Security Administration (SSA), Office of the Chief Actuary, *The 2021 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, August 31, 2021, <https://www.ssa.gov/OACT/TR/2021/tr2021.pdf> (hereinafter cited as "2021 Annual Report"). Under current law, the OASI and DI trust funds are distinct entities and cannot borrow from each other when faced with a funding shortfall. The shifting of funds between OASI and DI can be done only with authorization from Congress. In the past, Congress has authorized temporary interfund borrowing among the OASI, DI, and Medicare Hospital Insurance trust funds, as well as temporary payroll tax reallocations between OASI and DI, to deal with funding shortfalls. Most recently, under the Bipartisan Budget Act of 2015 (P.L. 114-74), Congress authorized a temporary reallocation of payroll taxes from the OASI fund to the DI fund for calendar years 2016-2018. Because of such actions, the OASI and DI trust funds are discussed on a combined basis. Separately, the OASI fund is projected to have asset reserves until 2033, at which point continuing income to the fund would be sufficient to pay 76% of OASI scheduled benefits. The DI fund is projected to have asset reserves until 2057, at which point continuing income would be sufficient to pay 91% of DI scheduled benefits (2021 Annual Report, p. 6.) The 2021 intermediate assumptions reflect the trustees' understanding of the status of the Social Security trust funds at the start of 2021. Unlike the previous year's report, the 2021 estimates do include potential effects of Coronavirus Disease 2019 (COVID-19). Although the report includes impacts from COVID-19, the impacts are confined to the near term. The trustees acknowledge that effects from the pandemic, especially in the long term, are subject to a high level of uncertainty.

³ SSA, Office of the Chief Actuary (OCACT), *Scaled Factors for Hypothetical Earnings Examples Under the 2021 Trustees Report Assumptions*, August 2021 at <https://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf>.

⁴ A maximum earner is a worker who has earnings at or above the contribution and benefit base for each year starting at age 22 through the year prior to retirement (2021 Annual Report, p. 156). The contribution and benefit base for 2022 is \$147,000 (see SSA, *2022 Social Security Changes*, <https://www.ssa.gov/news/press/factsheets/colafacts2022.pdf>).

cohort of workers and beneficiaries for which complete information on indexed earnings and program-specific factors are known.

Eligibility and Insured Status

Workers become eligible for Social Security benefits for themselves and for their family members by working in Social Security–covered employment.⁵ Generally speaking, about 94% of workers earn wages or self-employment income in Social Security–covered employment.⁶ While working in covered employment, workers earn *quarters of coverage* (QCs), or credits. The amount needed for a QC increases annually with growth in average earnings in the national economy as measured by the AWI (see **Table B-1**).⁷ In 2022, a worker will earn one credit or QC for every \$1,510 of earnings, up to four per year. Therefore, a worker earning \$6,040 in covered employment at any point in the calendar year would be credited with the maximum number (i.e., four) of QCs for that year.

Insured Status

To be eligible for most benefits, workers must be *fully insured*, which requires one QC for each year elapsed after the worker turns 21 years old—with a minimum of six QCs and a maximum of 40 QCs—and the year before the worker attains age 62, the year before the worker dies, or the year before the worker becomes disabled. A worker is first eligible for Social Security retirement benefits at 62, so to be eligible for retirement benefits, a worker must generally have worked for 10 years. Workers are *permanently insured* when they are fully insured and will not lose fully insured status when they stop working under covered employment, for example, if a worker has the maximum 40 QCs.

Benefits may be paid to eligible survivors of a worker who was fully insured at the time of death.⁸ Some dependents are also eligible for survivors benefits if the deceased worker was *currently insured*, which requires earning six QCs in the 13 quarters ending with the quarter of death.

To be eligible for disability benefits, workers must also satisfy a recency of work requirement. Workers aged 31 or older must have earned 20 QCs in the 10 years before becoming disabled. Fewer QCs are required for younger workers.⁹

In the case of workers having work history in multiple countries, international *totalization agreements* allow workers who divide their careers between the United States and certain

⁵ A list of eligibility requirements for family members is covered in Appendix C. Covered employment is employment for which earnings are creditable for Social Security purposes (2021 Annual Report, p. 243). The roughly 6% of workers who are not covered by Social Security are state and local government workers, certain workers employed by religious groups, and certain noncitizen workers.

⁶ OCACT, “Social Security Program Fact Sheet,” June 2021, <https://www.ssa.gov/oact/FACTS/index.html>.

⁷ The AWI is the average of all workers’ wages subject to federal income taxes and contributions to deferred compensation plans. It is calculated using some wages that are not subject to the Social Security payroll tax.

⁸ For more information on survivors benefits, see CRS Report RS22294, *Social Security Survivors Benefits*.

⁹ To be eligible for disability benefits, workers must also be found unable to engage in substantial gainful activity. See CRS Report R44948, *Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI): Eligibility, Benefits, and Financing*.

countries to fill gaps in Social Security coverage by combining work credits under each country's system to qualify for benefits under one or both systems.¹⁰

Amount Needed to Earn Credits

As discussed, in 2022, a worker will earn one QC for each \$1,510 of covered earnings.¹¹ Therefore, a worker earning \$6,040 in covered employment at any point in the calendar year would be credited with the maximum number (i.e., four) of QCs for that year. Alternatively, if a worker earned \$4,530 in covered employment in 2022, he or she would be credited with three QCs for that year (\$4,530 divided by \$1,510).

Average Index Monthly Earnings

The first step of computing a Social Security benefit is determining a worker's *average indexed monthly earnings* (AIME), a measure of a worker's past earnings.

A worker's Social Security benefit is based on his or her earnings during covered employment. That is, only earnings from years of covered employment are included in the calculation. Earnings that were not covered (i.e., not subject to the Social Security payroll tax) are not included in the calculation.

Under current law, the Social Security payroll tax is applied to covered earnings up to an annual limit, or taxable maximum. The taxable maximum is indexed to national average wage growth for years in which a cost-of-living adjustment (COLA) is payable. The taxable maximum will increase from \$142,800 in 2021 to \$147,000 in 2022. This level of earnings is both the contribution base (i.e., amount of covered earnings subject to the Social Security payroll tax) and the benefit base (i.e., amount of covered earnings used to determine benefits). Earnings in excess of the taxable maximum are not subject to the Social Security payroll tax and are not factored into benefit calculations.

Wage Indexing

Rather than using the amounts earned in past years directly, the AIME computation process first updates past earnings to account for the growth in overall economy-wide earnings. That is done by increasing each year of a worker's taxable earnings after 1950 by the growth in average earnings in the economy, as measured by the AWI, from the year of work until two years prior to eligibility for benefits, which for retired workers is at age 60. (Workers are first eligible for benefits at age 62.¹²) For example, the national average wage grew from \$32,155 in 2000 to \$41,674 in 2010. So if a worker earned \$20,000 in 2000 and turned 60 in 2010, the *indexed* wage for 2000 would be $\$20,000 \times (\$41,674/\$32,155)$, or \$25,921. Earnings from later years—for retired workers at ages 60 and above—are not indexed.

¹⁰ See CRS Report RL32004, *Social Security Benefits for Noncitizens*.

¹¹ Since 1978, the amount needed to earn a QC has been indexed to changes in the AWI. See OACT, "Quarter of Coverage," <https://www.ssa.gov/OACT/COLA/QC.html>. Under current law, the amount needed to earn a QC cannot decrease. That is, the amount required is the higher of (1) the amount in effect for the calendar year a determination is made or (2) the product of that calendar year's amount and the change in the AWI (42 U.S.C. §413(a)).

¹² SSA uses the national average wage indexing series to ensure that future benefits reflect the general rise in the standard of living over the course of a worker's earning history. For details, see "Index earnings used to compute initial benefits" in OACT, "National Average Wage Index," <https://www.ssa.gov/oact/COLA/AWI.html>.

Number of Years

For retired workers, the AIME equals the average of the highest 35 years of indexed earnings divided by 12 (to change the benefit from an annual to a monthly measure). Those years of earnings are known as *computation years*. If the person worked fewer than 35 years in employment subject to Social Security payroll taxes, the computation includes some years of zero earnings.

In the case of workers who die before turning 62 years old, the number of computation years is generally reduced below 35 by the number of years until he or she would have reached 62. For example, the AIME for a worker who died at 61 is based on 34 computation years.

For disabled workers, the number of computation years depends primarily on the age at which they become disabled, increasing from two years for those aged 24 or younger to 35 years for those aged 62 or older.¹³

AIME for Hypothetical Workers Born in 1952

Table 1 shows the AIME for the four hypothetical scaled earners and maximum earner for the 1952 birth cohort. (Nominal annual earnings for this cohort are shown in **Table A-2**, and wage-indexed earnings for this cohort are shown in **Table A-3**.) These workers, born in 1952, are assumed to have entered the labor force in 1973 (i.e., age 21) and worked continually until 2014 (i.e., age 62). As discussed and shown in **Table A-3**, annual earnings until age 60 are wage-indexed using the AWI, whereas earnings for later years are kept at nominal values (reflected by an index factor of 1.00 in **Table A-3**). The AIME is calculated by taking the total of the highest 35 years of earnings and dividing by 420 (the number of months in 35 years).

Table 1. Total Wage-Indexed Earnings and Average Indexed Monthly Earnings (AIME) for Hypothetical Workers Born in 1952, by Earnings Level

	Very Low Earner	Low Earner	Medium Earner	Higher Earner	Maximum Earner
Total Earnings from Highest 35 Years of Wage-Indexed Earnings	\$386,516.41	\$695,712.04	\$1,545,756.54	\$2,473,343.43	\$3,734,047.63
AIME	920.00	1,656.00	3,680.00	5,888.00	8,890.00

Source: CRS.

Note: Wage-indexed earnings are rounded to the nearest cent, and AIMEs are rounded down to the nearest dollar (see 20 C.F.R. §404.211).

¹³ The number of computation years equals the number of “elapsed years” minus any “dropout years.” The number of elapsed years equals the calendar years after an individual turns 21 years old through the year before the individual first becomes eligible for disability benefits with a minimum of two. For every five elapsed years, there is one disability dropout year up to a maximum of five. In addition, people with fewer than three disability dropout years may be credited with up to two additional dropout years based on the care of a child for up to a total of three dropout years. See CRS Report R43370, *Social Security Disability Insurance (SSDI): Becoming Insured, Calculating Benefit Payments, and the Effect of Dropout Year Provisions*.

Primary Insurance Amount

The next step in determining a benefit is to compute the *primary insurance amount* (PIA) by applying a benefit formula to the AIME.

First, the AIME is sectioned into three brackets (or segments) of earnings, which are divided by dollar amounts known as bend points. In 2022, the bend points will be \$1,024 and \$6,172.¹⁴ Those amounts are indexed to the AWI, so they generally increase each year.¹⁵

Three factors—which are fixed by law at 90%, 32%, and 15%—are applied to the three brackets of AIME to allow for a progressive benefit formula. For workers with AIMEs of \$1,024 or less in 2022, the PIA is 90% of the AIME. Because the other two factors are lower, the share of earnings that is replaced by the Social Security benefit declines as AIMEs increase. For workers who become eligible for retirement benefits, become disabled, or die in 2022, the PIA is determined as shown in the examples in **Table 2**. Benefits are based on covered earnings. Earnings up to the maximum taxable amount (\$147,000 in 2022) are subject to the Social Security payroll tax. If a worker earns the maximum taxable amount in every year of a full work history, becomes eligible in 2022, and claims benefits at the full retirement age (FRA), the maximum PIA is \$3,345.¹⁶

PIA for Hypothetical Workers Born in 1952

Table 2 shows how to calculate the PIAs for the four hypothetical scaled earners and the maximum earner for the 1952 birth cohort (who reached age 62 in 2014). This table highlights several features of the benefit formula. First, the formula results in a *progressive* replacement rate—measured as the percent of AIME that the PIA replaces. That is, the replacement rate is higher for lower earners (i.e., 83% for very low earners) than for higher earners (i.e., 37% for high earners). Second, the benefit formula results in *individual equity*. Specifically, the more a worker earns (and pays in payroll tax), up to the taxable maximum, the higher the PIA. For instance, a hypothetical low earner born in 1952 had monthly wage-indexed earnings of about \$1,656, resulting in a PIA of \$1,003.20, whereas a maximum earner born in the same year had wage-indexed earnings of about \$8,890 and thus a PIA of \$2,642.60. The maximum earner paid the largest possible amount in payroll tax in each year of employment, while the low earner paid considerably less.¹⁷ His or her PIA is almost four times that of the very low earner.

¹⁴ The bend points used in the PIA formula are rounded to the nearest dollar (42 U.S.C. §415(a)(1)(B)(iii)).

¹⁵ Bend points are indexed to the AWI and can decrease when AWI decreases (42 U.S.C. §415(a)(1)(B)). See **Table B-1** for a list of historical bend point values. For more information on effects of wage indexing and price indexing on benefits, see CRS Report R46819, *Social Security: The Effects of Wage and Price Indexing on Benefits*.

¹⁶ SSA, “2022 Social Security Changes.”

¹⁷ For the 1952 birth cohort, a hypothetical low earner would have paid a lifetime total of \$15,271.54 in Social Security payroll taxes on total nominal earnings of \$251,188.17, whereas a hypothetical maximum earner would have paid a lifetime total of \$148,112.69 in payroll taxes on total nominal earnings of \$2,443,400. Both workers would have been subject to the same employee payroll tax rate. The hypothetical maximum earner would have received larger benefits based on higher earnings subject to the payroll tax. Social Security benefits themselves may also be subject to federal income tax. For more information, see CRS Report RL32552, *Social Security: Taxation of Benefits*.

Table 2. Computation of Primary Insurance Amounts (PIAs) for Hypothetical Workers Born in 1952, by Earnings Levels

Factors	Three Brackets of Average Indexed Monthly Earnings (AIME) in 2014	PIAs for Hypothetical Workers				
		Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
		AIME of \$920.00	AIME of \$1,656.00	AIME of \$3,680.00	AIME of \$5,888.00	AIME of \$8,890.00
90%	first \$8161 of AIME, plus	\$734.40	\$734.40	\$734.40	\$734.90	\$734.90
32%	AIME over \$816 and through \$4,917, plus	33.28	268.80	916.48	1,312.32	1,312.32
15%	AIME over \$4,917	0.00	0.00	0.00	145.65	595.95
Total: Worker's PIA (by law, rounded down to nearest 10 cents)		767.60	1,003.20	1,650.80	2,192.30	2,642.60
PIA as Percent of AIME		83%	61%	45%	37%	30%

Source: CRS.

Notes: The bend points shown in the table apply to workers who first become eligible in 2014. See **Table B-1** for historical values of bend points. Under current law, PIA is rounded down to the nearest dime (42 U.S.C. §415(a)(1)(A)).

Benefit Amounts

The PIA calculated in the previous section may not be the benefit amount a worker will receive at retirement. The PIA is further adjusted for age at benefit claiming and COLAs to determine the benefit amount. Also, PIAs may be recomputed to capture additional covered earnings.¹⁸

Age

The *earliest eligibility age* is the age at which a retired worker can first claim benefits. The *full retirement age* (FRA, also called the normal retirement age) is the age at which a worker can receive the full PIA, increased by any COLAs. The FRA was 65 for people born before 1938, but the Social Security Amendments of 1983 (P.L. 98-21) raised the FRA for those born later, as shown in **Table 3**.

Table 3. Full Retirement Age (FRA) by Year of Birth

Year of Birth	Year of Earliest Eligibility Age	FRA
1937 or earlier	1999 or earlier	65
1938	2000	65 and 2 months
1939	2001	65 and 4 months

¹⁸ 20 C.F.R. §404.281.

Year of Birth	Year of Earliest Eligibility Age	FRA
1940	2002	65 and 6 months
1941	2003	65 and 8 months
1942	2004	65 and 10 months
1943-1954	2005-2016	66
1955	2017	66 and 2 months
1956	2018	66 and 4 months
1957	2019	66 and 6 months
1958	2020	66 and 8 months
1959	2021	66 and 10 months
1960 or later	2022 or later	67

Source: Social Security Administration, Office of the Chief Actuary, “Normal Retirement Age,” <http://www.ssa.gov/OACT/progdata/nra.html>.

Adjustments for Early and Late Benefit Claim

Retired workers may claim benefits when they turn 62 years old, but the longer that they wait, the higher their monthly benefit. The higher monthly benefit is intended to offset the fewer number of payments that people who delay claiming will receive over their lifetimes so that the total value of lifetime benefits is approximately the same based on average life expectancy, regardless of when they claim.¹⁹

The permanent reduction in monthly benefits that applies to people who claim *before* the FRA is an *actuarial reduction*. It equals five-ninths of 1% for each month (6⅔% per year) for the first three years of early claim and five-twelfths of 1% for each month (5% per year) beyond 36 months.

The permanent increase in monthly benefits that applies to those who claim *after* the FRA is called the *delayed retirement credit* (DRC). For people born in 1943 and later, that credit is 8% for each year of delayed claim after the FRA up to age 70.²⁰

For people with an FRA of 66, therefore, monthly benefits are 75% of the PIA for those who claim benefits at the age of 62 and 132% of the PIA for people who wait until the age of 70 to claim (see **Table B-2**). Because people who claim earlier receive more payments over a lifetime, all else equal, the overall effect of claiming at different ages depends on how long the beneficiary lives.

Workers with a higher FRA may receive relatively lower benefits for two reasons. First, monthly benefits will be different for individuals who have identical work histories and the same age of claiming benefits but different FRAs. For example, someone with an FRA of 66 who claims at

¹⁹ Said differently, adjustments for early or late benefit claiming are intended to be *actuarially equivalent*. Under average life expectancies, early claimants receive smaller benefits but over a longer period of time, whereas late claimants receive higher benefits for a shorter period of time. Average life expectancies vary across demographic groups such as age, race, and sex. For more information, see CRS Report R44846, *The Growing Gap in Life Expectancy by Income: Recent Evidence and Implications for the Social Security Retirement Age*.

²⁰ For people born before 1943, the DRC varies from 3.0% to 7.5% depending on the year of birth. See “Delayed Retirement Credit” in OACT, “Early or Late Retirement?,” http://www.ssa.gov/OACT/quickcalc/early_late.html#late.

age 62 will receive a monthly benefit equal to 75% of the PIA. For someone with an FRA of 67, claiming at 62 will result in a monthly benefit that is 70% of the PIA. Depending on the claiming age, the scheduled increase in the FRA from 66 to 67 will reduce monthly benefits for workers with similar earnings by between 6.1% and 7.7%. Second, lifetime benefits will be different for workers who have identical work histories and identical age of death but different FRAs. For example, consider two workers who have FRAs of 65 and 67, respectively, both of whom claim at their FRA and thus receive identical monthly benefits. If both workers die at age 75, the worker with an FRA of 65 will have received monthly benefits for 10 years, compared with the worker with an FRA of 67, who will have received monthly benefits for eight years.

Cost-of-Living Adjustments

A COLA is applied to the benefit beginning in the second year of eligibility, which for retired workers is age 63. The COLA applies even if a worker has not yet begun to receive benefits. The COLA usually equals the growth in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) from the third quarter of one calendar year to the third quarter of the next calendar year. The COLA becomes effective in December of the current year and is payable in January of the following year.²¹ Beneficiaries will receive a COLA of 5.9% for benefits paid in January 2022.²²

Benefit Amounts for Hypothetical Workers Born in 1952

As discussed, the PIA is not the benefit amount a worker receives. Adjustments to the PIA for early or late claiming (relative to a worker's FRA) interact with COLAs to produce the actual benefit amount. These two factors affect all claimants, while other adjustments may affect only some claimants (see "Other Adjustments to Benefits"). **Table 4** shows how claiming age—and the associated actuarial reduction or DRC—works with COLAs to produce benefit amounts before other adjustments. Specifically, **Table 4** shows first how the PIA is adjusted for the claimant's age. For instance, a worker born in 1952 (FRA of 66) claiming at age 62 (48 months before FRA) would receive 75% of his or her PIA. This reduction represents five-ninths of 1% reduction for 36 months and a five-twelfths of 1% reduction for 12 months. **Table 4** also shows how COLAs begin to affect benefit amounts beginning at age 63. For instance, a worker born in 1952 claiming at age 66 (i.e., FRA) would receive 100% of his or her PIA plus COLAs for 2015, 2017, and 2018. (There was no COLA payable for 2016; see **Table B-1**.) Additionally, since the COLAs represent a percentage change in benefit amounts that increase the base benefit, benefits demonstrate cumulative growth with each COLA increase. Lastly, workers claiming benefits after FRA receive DRCs. For instance, a worker born in 1952 claiming at age 70 would receive 132% of his or her PIA plus all of the payable COLAs from 2015 through 2022.

Adjustments for early or late claiming and COLAs can have significant effects on a worker's benefit amount. For instance, a medium earner born in 1952 claiming benefits at age 62, the earliest eligibility age, would receive initial benefits of \$1,238. Those benefits would increase by annual COLAs: benefits of \$1,238 at age 62 would grow to \$1,442 at age 70. (This amount

²¹ Social Security payments always reflect the benefits due for the preceding month.

²² SSA, *2022 Social Security Changes*, <https://www.ssa.gov/news/press/factsheets/colafacts2022.pdf>. If the CPI-W does not increase over the relevant period, no COLA is payable. No COLA was payable in January 2010 or January 2011, because the CPI-W for the third quarter of 2009 and for the third quarter of 2010 were both lower than the CPI-W for the third quarter of 2008. No COLA was payable in January 2016 because the CPI-W for the third quarter of 2015 was lower than the CPI-W for the third quarter of 2014. For details, see CRS Report 94-803, *Social Security: Cost-of-Living Adjustments*.

reflects 16.58% in cumulative COLAs.²³) In comparison, a medium earner born in 1952 claiming benefits at age 70, thereby taking advantage of all possible DRCs, would receive initial benefits of \$2,540. (This amount reflects a 32% increase from DRCs and a 16.58% increase from COLAs.)

Table 4. Monthly Benefit Amounts for Hypothetical Workers Born in 1952, by Earnings Level at Claiming Age

Primary insurance amounts (PIAs) adjusted for claiming age relative to full retirement age (FRA) and cost-of-living adjustments (COLAs)

Year/Age	Percent of PIA	COLA	Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
			PIAs from Table 2.				
			\$767.60	\$1,003.20	\$1,650.80	\$2,192.30	\$2,642.60
			Benefit Amounts				
2014/62	75%	-	575.00	752.00	1,238.00	1,644.00	1,981.00
2015/63	80%	1.7%	624.00	816.00	1,343.00	1,783.00	2,150
2016/64	86.66%	0.0%	676.00	884.00	1,454.00	1,932.00	2,329.00
2017/65	93.33%	0.3%	730.00	955.00	1,571.00	2,087.00	2,515.00
2018/66	100%	2.0%	798.00	1,043.00	1,717.00	2,280.00	2,749.00
2019/67	108%	2.8%	886.00	1,158.00	1,906.00	2,532.00	3,052.00
2020/68	116%	1.6%	967.00	1,264.00	2,080.00	2,763.00	3,331.00
2021/69	124%	1.3%	1,047.00	1,369.00	2,253.00	2,992.00	3,607.00
2022/70	132%	5.9%	1,181.00	1,543.00	2,540.00	3,373.00	4,066.00

Source: CRS.

Notes: Under current law, monthly benefit amounts are rounded down to the nearest dollar (42 U.S.C. §415(g)).

Features of the Benefit Formula

In the AIME computation, earnings are indexed to the AWI, and the bend points in the benefit formula are also indexed to growth in the AWI. As a result, replacement rates—the portion of earnings that benefits replace—remain generally stable. That is, from year to year, the average benefits that *new* beneficiaries receive increase at approximately the same rate as average earnings in the economy.

As demonstrated in **Table 2**, the benefit formula is generally considered to be *progressive*. In this context, *progressive* means that a higher share of earnings is replaced for career low earners than for career higher earners. However, although low lifetime earners have a higher replacement rate, they do not receive higher benefits compared to relatively higher lifetime earners. This feature is often referred to as *individual equity*. That is, higher lifetime earners receive higher benefits.

Additionally, as shown in **Table 4**, a worker who claimed benefits early—before reaching FRA—would receive lower monthly benefits than if he or she claimed at FRA. Furthermore, a worker

²³ The cumulative effect of the COLAs shown in **Table 4** is 16.58%.

who claimed benefits late—after reaching FRA—would receive higher monthly benefits than if he or she claimed at FRA. This feature is known as *actuarial equivalence*, because the intent is to provide the same amount of lifetime benefits regardless of when a worker claims benefits.²⁴

Lastly, all things being equal, the more years a worker is able to work, the higher dollar amount he or she may receive in benefits. Said differently, years of zero earnings will generally result in lower lifetime earnings in the Social Security benefit computation. Consider the hypothetical earners born in 1952 who are assumed to have worked continuously. If each scaled earner’s highest year of earnings was replaced with a zero (representing a year out of the workforce, for example, for education, caregiving or any other reason), his or her highest 35 years of wage-indexed earnings, the amount used to compute AIME, and PIA would all decrease. (See Scenario B in **Table 5**. Scenario A reproduces information for hypothetical earners from previous sections.) The replacement rate—measured as percent of AIME replaced by PIA—increases for some earners. In Scenario B, the highest year of earnings (occurring in the hypothetical worker’s late 40s) was replaced by a year of lower earnings. This has the effect of essentially taking the second- through 36th-highest years of earnings from **Table A-3**.

Scenario B demonstrates how a worker can benefit from *more* work. That is, since the highest 35 years of earnings are used in the benefit formula, the hypothetical earners still had 35 years of earnings. However, if a worker does not have 35 years of earnings, the benefit formula will impute years of zero earnings. Consider the same hypothetical earners born in 1952 but with a longer break in employment (for example, representing years out of the workforce for education, caregiving, or unemployment) of seven years. In this example, Scenario C, the hypothetical workers would not have years of *extra* earnings, and one year of zero earnings would be used in their benefit calculations. **Table 5** shows how their highest 35 years of wage-indexed earnings, AIME, and PIA would decrease. As in the previous example, as a result of a decrease in cumulative lifetime earnings, some replacement rates increase. This has the effect of essentially taking the eighth- through 41st-highest years of earnings from **Table A-3**. Since the hypothetical earners had 41 years (from age 21 through age 61) of earnings, the highest 35 years of earnings would now include one year of zero earnings.

Table 5. Wage-Indexed Earnings, Average Indexed Monthly Earnings (AIMEs), and Primary Insurance Amounts (PIAs) for Hypothetical Earners Born in 1952, by Earnings Level and Years of Earnings

	Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
Scenario A (from Table 1 and Table 2)					
Total Earnings from Highest 35 Years of Waged Indexed Earnings	\$386,516.41	\$6695,712.04	\$1,545,756.54	\$2,473,343.43	\$3,734,047.63
AIME	920.00	1,656.00	3,680.00	5,888.00	8,890.00
PIA	767.60	1,003.20	1,650.80	2,192.30	2,642.60
PIA as Percent of AIME	83%	61%	45%	37%	30%
Scenario B (Scenario A with highest year of earnings removed)					

²⁴ Actuarial equivalence is dependent on life expectancies, which are known to vary by demographic group. See footnote 19.

Total Earnings from Highest 35 Years of Waged Indexed Earnings	\$381,685.35	\$687,025.00	\$1,526,387.97	\$2,442,406.91	\$3,692,557.35
AIME	908.00	1,635.00	3,634.00	5,815.00	8,791.00
PIA	763.80	996.40	1,636.10	2,181.40	2,627.80
PIA as Percent of AIME	84%	61%	45%	38%	30%
Percent Reduction in PIA from Scenario A	0.5%	0.7%	0.9%	0.5%	0.6%
Scenario C (Scenario A with highest seven years of earnings removed)					
Total Earnings from Highest 35 Years of Waged Indexed Earnings	\$333,684.98	\$600,597.74	\$1,334,164.89	\$2,135,036.12	\$3,371,699.59
AIME	794.00	1,429.00	3,176.00	5,083.00	8,027.00
PIA	714.60	930.50	1,489.60	2,071.60	2,513.20
PIA as Percent of AIME	90%	65%	47%	41%	31%
Percent Reduction in PIA from Scenario A	6.9%	7.2%	9.8%	5.5%	4.9%

Source: CRS.

Note: Wage-indexed earnings are rounded to the nearest cent, and AIMEs are rounded down to the nearest dollar (see 20 C.F.R. §404.211). Under current law, PIA is rounded down to the nearest dime (42 U.S.C. §415(a)(1)(A)).

Auxiliary Benefits

Although the majority of Social Security benefits are paid to retired or disabled workers, many family members of workers are eligible to receive auxiliary benefits based on the workers' earnings. In September 2021, 10.1 million family members of retired, disabled, or deceased workers received Social Security auxiliary benefits (about 15.5% of the beneficiary population).²⁵ Social Security auxiliary benefits are payable to the spouse, divorced spouse, or dependent child of a retired or disabled worker and to the widow(er), divorced widow(er), dependent child, or parent of a deceased worker.²⁶ When dependent beneficiaries also earned worker benefits, they receive the larger of the worker or the auxiliary benefit.²⁷

Benefits payable to family members are equal to a specified percentage of the worker's PIA, subject to a *maximum family benefit*. A spouse's base benefit (that is, before any adjustments) equals 50% of the worker's PIA. A widow(er)'s base benefit is 100% of the worker's PIA. The base benefit for children of a retired or disabled worker is 50% of the worker's PIA, and the base benefit for children of deceased workers is 75% of the worker's PIA. Benefits payable to family

²⁵ SSA, "Monthly Statistical Snapshot, September 2021," Table 2. See the latest edition of the Monthly Statistical Snapshot at https://www.ssa.gov/policy/docs/quickfacts/stat_snapshot/.

²⁶ The computation of dependent benefits may be quite complex. For additional details and information on other dependent benefits, see "Benefits for the Worker's Family Members" in CRS Report R42035, *Social Security Primer*.

²⁷ Someone with an auxiliary benefit higher than his or her retired-worker benefit is referred to as dually entitled and receives his or her retired-worker benefit plus a reduced auxiliary benefit amount equal to the full auxiliary benefit minus the retired-worker benefit, in essence receiving the higher auxiliary benefit amount. For more information on dual entitlement, see CRS In Focus IF10738, *Social Security Dual Entitlement*.

members may be subject to adjustments based on the family member's age at entitlement, receipt of a Social Security benefit based on his or her own work record, and other factors.²⁸

Table C-1 provides a summary of Social Security benefits payable to the family members of a retired, disabled, or deceased worker. It includes the basic eligibility requirements and basic benefit amounts before any applicable adjustments (such as for the maximum family benefit).

Maximum Family Benefits

The total amount of Social Security benefits payable to a family based on a retired, disabled, or deceased worker's record is capped by the maximum family benefit. The family maximum cannot be exceeded regardless of the number of beneficiaries entitled to benefits on the worker's record.²⁹ If the sum of all benefits payable on the worker's record exceeds the family maximum, the benefit payable to each dependent or survivor is reduced in equal proportion to bring the total amount of benefits payable to the family within the limit. In the case of a *retired or deceased worker*, the maximum family benefit is determined by a formula and varies from 150% to 188% of the worker's PIA. For the family of a worker who attains the age of 62 in 2022 or dies in 2022 before attaining the age of 62, the total amount of benefits payable to the family is limited to

- 150% of the first \$1,308 of the worker's PIA, plus
- 272% of the worker's PIA over \$1,308 and through \$1,889, plus
- 134% of the worker's PIA over \$1,889 and through \$2,463, plus
- 175% of the worker's PIA over \$2,463.³⁰

The dollar amounts in the maximum family benefit formula (\$1,308/\$1,889/\$2,463 in 2022) are indexed to the AWI, as in the regular benefit formula. In the case of a *disabled worker*, the maximum family benefit is equal to 85% of the worker's AIME. However, the family maximum cannot be *less than 100%* or *more than 150%* of the worker's PIA.³¹

Other Adjustments to Benefits

Other benefit adjustments apply in certain situations, including

- the *windfall elimination provision*, which reduces benefits for *worker* beneficiaries who have pensions from employment that was not subject to Social Security payroll taxes;³²
- the *government pension offset*, which reduces Social Security *spousal* benefits paid to people who have pensions from employment that was not subject to Social Security payroll taxes;³³ and

²⁸ Similar to a worker's benefit, auxiliary benefits paid to family members may also be subject to adjustment based on age. For more information, see CRS Report R41479, *Social Security: Revisiting Benefits for Spouses and Survivors*.

²⁹ Social Security Act, Title II, §203.

³⁰ SSA, "Formula for Family Maximum Benefit," <https://www.socialsecurity.gov/OACT/COLA/familymax.html>.

³¹ Benefits for a divorced beneficiary are not taken into account for purposes of the family maximum. See SSA, "Family Benefits Where a Divorced Spouse or a Surviving Divorced Spouse is Entitled," <https://secure.ssa.gov/apps10/poms.nsf/lnx/0300615682>.

³² See CRS Report 98-35, *Social Security: The Windfall Elimination Provision (WEP)*.

³³ See CRS Report RL32453, *Social Security: The Government Pension Offset (GPO)*.

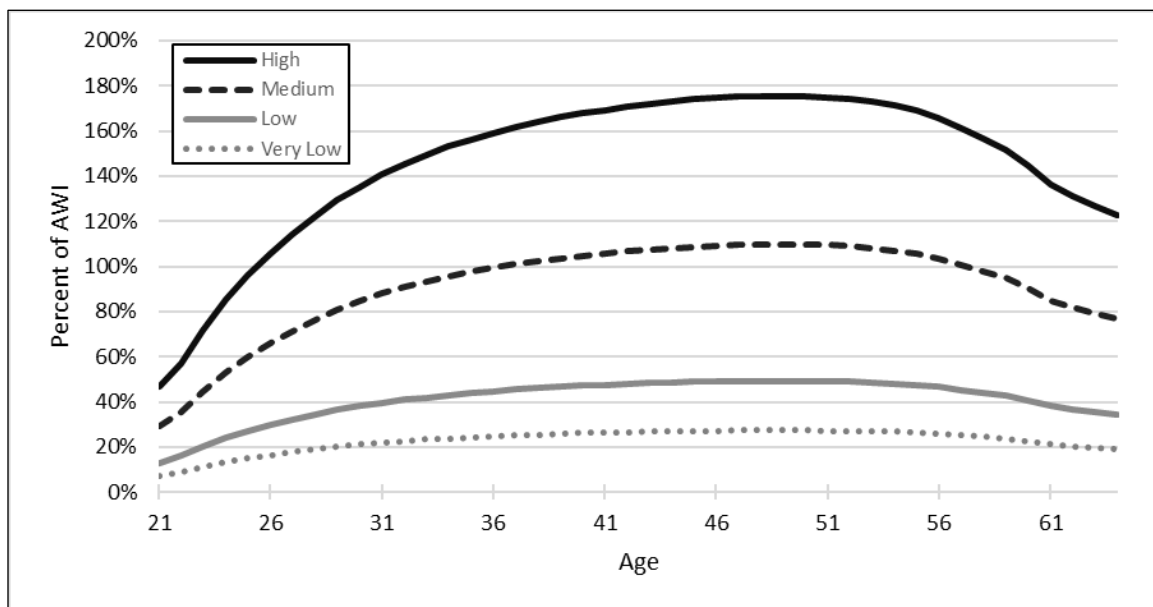
- the *retirement earnings test*, which results in a temporary withholding of monthly Social Security benefits paid to beneficiaries who are younger than FRA and have earnings above a certain level.³⁴

³⁴ See CRS Report R41242, *Social Security Retirement Earnings Test: How Earnings Affect Benefits*.

Appendix A. Hypothetical Workers, Wages, and Indexed Wages

SSA's Office of the Chief Actuary (OCACT) uses hypothetical earnings patterns to evaluate the program under current law and to illustrate how program changes may affect beneficiaries.³⁵ OCACT publishes scaled factors for very low, low, medium, and high earners as a percent of AWI. Hypothetical workers are assumed to have long and consistent earnings at their respective levels. At these levels, hypothetical workers have earnings from ages 21 to 64, with peak earnings in their late 40s. For instance, a hypothetical medium earner's work history would begin at age 21 with relatively *medium* wages and gradually increase until age 50, remaining relatively *medium*, and then begin to decrease until age 64. The scaled factors (i.e., percent of AWI) for different hypothetical earnings groups are shown in **Figure A-1**.

Figure A-1. Scaled Factors by Hypothetical Earnings Level and Age
Percent of Average Wage Index (AWI)



Source: OCACT, *Scaled Factors for Hypothetical Earnings Examples Under the 2021 Trustees Report Assumptions*, August 2021, Table 6, <https://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf>.

Notes: There is no scaled factor for a maximum earner.

Table A-1 shows how actual workers are distributed relative to the hypothetical scaled workers. As an example, **Table A-1** shows that a hypothetical medium-scaled worker retiring at age 62 in 2020 had career average earnings of \$53,892 (in 2019 dollars). For *actual workers* retiring in years 2015-2020, 56.2% had an AIME less than the hypothetical medium earner with \$53,892 in career-average earnings. During the same 2015-2020 period, 70.6% of female workers had an AIME less than this hypothetical medium earner, whereas 42.3% of males had an AIME less than the hypothetical medium earner. **Table A-1** also shows the percent of workers with AIMEs *closest*

³⁵ OCACT, *Scaled Factors for Hypothetical Earnings Examples Under the 2021 Trustees Report Assumptions*. See <https://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf>.

to hypothetical scaled workers. For instance, 30.3% of workers retiring in 2015-2020 have AIMEs closest to that of a hypothetical medium-scaled worker.

Table A-1. Distribution of Average-Indexed Monthly Earnings (AIMEs) of Actual Workers Retiring in Years 2015-2020, Relative to AIMEs for Hypothetical Workers Retiring in 2020

Hypothetical Worker ^b (Career-Average Earnings) ^c	Percent with AIME Less Than AIME for Hypothetical Case			Percent with AIME Closest to AIME for Hypothetical Case ^a		
	All Males	All Females	All Workers	All Males	All Females	All Workers
Very Low (\$13,473)	7.8%	15.8%	11.8%	12.2%	23.9%	18.0%
Low (\$24,252)	16.3	32.0	24.0	16.0	29.2	22.5
Medium (\$53,892)	42.3	70.6	56.2	29.9	30.7	30.3
High (\$86,228)	71.4	91.5	81.2	27.1	13.2	20.3
Maximum (\$132,868)	100.0	100.0	100.0	14.9	2.9	9.0

Source: OACT, *Scaled Factors for Hypothetical Earnings Examples Under the 2021 Trustees Report Assumptions*, Actuarial Note Number 2021.3, August 2021, Table 1, <https://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf>.

Notes: Worker distributions include individuals who are dually entitled or may become dually entitled to a higher benefit in the future based on another worker’s earnings record. For more information on dual entitlement, see CRS In Focus IF10738, *Social Security Dual Entitlement*.

- a. Rounded values do not necessarily sum to 100%. The percentage of workers with AIME values closest to that of the hypothetical maximum worker is expected to decline in future years. This is due to a significant increase in the OASDI maximum taxable earnings, relative to the AWI, in 1981 and a smaller increase in 1990.
- b. A hypothetical worker is assumed to have a long and consistent career with earnings at each age from 21 through 64.
- c. Career-average earnings of hypothetical scaled workers retiring at age 62 in 2020. Earnings are wage-indexed to 2019 in this calculation.

Figure A-1 showed the scaled factors for each hypothetical earning level. **Table A-1** showed who in the *actual* workforce is similar and closest to the hypothetical earnings groups. To determine what hypothetical workers earned, the scaled factor for each age is multiplied by a year’s AWI. This analysis selected the 1952 birth cohort, the youngest birth cohort for which all information on wage-indexed and price-indexed parameters are known. The hypothetical worker for this birth cohort began work at age 21 in 1973 and reached peak earnings sometime in the late 1990s or early 2000s. These workers reached early eligibility age (i.e., 62) in 2014, full retirement age (i.e., 66) in 2018, and age 70 in 2022. The hypothetical earnings for each earnings level are shown in **Table A-2**. Also, wages for a maximum earner—a worker who earned at or above the contributions base in each year—is shown.

Table A-2. Hypothetical Wages for 1952 Birth Cohort by Earnings Level

Year	Age	Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
1973	21	\$553.35	\$993.00	\$2,205.83	\$3,532.35	\$10,800.00
1974	22	714.74	1,284.92	2,850.92	4,561.47	13,200.00
1975	23	966.66	1,743.45	3,866.65	6,188.37	14,100.00
1976	24	1,227.12	2,214.36	4,917.71	7,870.19	15,300.00
1977	25	1,466.92	2,640.45	5,867.66	9,388.26	16,500.00
1978	26	1,741.74	3,135.14	6,956.42	11,136.61	17,700.00
1979	27	2,054.82	3,684.91	8,196.33	13,121.02	22,900.00
1980	28	2,390.07	4,304.63	9,560.28	15,303.96	25,900.00
1981	29	2,782.17	5,013.41	11,128.66	17,808.62	29,700.00
1982	30	3,080.64	5,536.44	12,293.51	19,675.43	32,400.00
1983	31	3,352.63	6,034.74	13,395.29	21,441.61	35,700.00
1984	32	3,662.66	6,599.24	14,666.78	23,460.39	37,800.00
1985	33	3,936.47	7,065.45	15,712.22	25,149.65	39,600.00
1986	34	4,139.91	7,465.70	16,576.98	26,537.03	42,000.00
1987	35	4,496.07	8,107.66	18,002.70	28,800.64	43,800.00
1988	36	4,814.18	8,661.65	19,237.37	30,760.46	45,000.00
1989	37	5,085.19	9,145.30	20,300.55	32,500.97	48,000.00
1990	38	5,383.16	9,693.90	21,532.65	34,464.86	51,300.00
1991	39	5,649.20	10,186.02	22,618.63	36,207.26	53,400.00
1992	40	6,009.08	10,825.52	24,036.32	38,462.70	55,500.00
1993	41	6,107.02	11,011.15	24,451.23	39,140.48	57,600.00
1994	42	6,342.19	11,401.69	25,345.02	40,547.28	60,600.00
1995	43	6,645.82	11,957.54	26,558.58	42,469.03	61,200.00
1996	44	7,022.67	12,620.07	28,038.84	44,882.87	62,700.00
1997	45	7,459.87	13,438.74	29,839.49	47,748.67	65,400.00
1998	46	7,879.17	14,199.83	31,545.55	50,449.80	68,400.00
1999	47	8,348.74	15,021.63	33,394.94	53,413.63	72,600.00
2000	48	8,810.42	15,852.33	35,241.68	56,367.40	76,200.00
2001	49	9,020.61	16,230.51	36,082.42	57,712.13	80,400.00
2002	50	9,111.07	16,393.28	36,444.29	58,290.91	84,900.00
2003	51	9,299.73	16,759.96	37,267.06	59,613.66	87,000.00
2004	52	9,696.41	17,467.79	38,821.27	62,099.77	87,900.00
2005	53	9,977.29	17,959.13	39,946.13	63,928.59	90,000.00
2006	54	10,358.58	18,629.98	41,395.66	66,248.52	94,200.00
2007	55	10,707.45	19,233.01	42,749.00	68,406.48	97,500.00

Year	Age	Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
2008	56	10,705.76	19,262.10	42,781.69	68,450.71	102,000.00
2009	57	10,259.33	18,483.07	41,037.30	65,708.54	106,800.00
2010	58	10,210.09	18,378.16	40,840.35	65,302.89	106,800.00
2011	59	10,186.17	18,309.31	40,701.69	65,114.11	106,800.00
2012	60	10,016.70	18,038.92	40,066.79	64,133.46	110,100.00
2013	61	9,516.29	17,147.28	38,154.94	61,047.90	113,700.00
2014	62	9,528.71	17,151.68	38,161.33	61,030.24	117,000.00
2015	63	9,523.53	17,171.21	38,142.21	60,989.06	118,500.00
2016	64	9,290.65	16,732.90	37,259.89	59,586.63	118,500.00

Source: CRS.

Notes: Very low, low, medium, and high earners are assumed to work at specified ages with earnings equivalent to the respective scaled earners as shown in OCACT, *Scaled Factors for Hypothetical Earnings Examples Under the 2021 Trustees Report Assumptions*, August 2021, Table 6, <https://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf>. All dollar values are shown in nominal terms (i.e., not indexed). Maximum earners are assumed to have earned at or above the contribution base in each respective year (see **Table B-1**).

As discussed, the first step in determining benefit amounts is to index a worker's nominal earnings to SSA's AWI (see **Table B-1**). Earnings up to age 60 are wage-indexed, and earnings after age 60 are kept in nominal terms. The wage-indexed earnings for scaled hypothetical workers born in 1952 are shown in **Table A-3**.

Table A-3. Wage-Indexed Hypothetical Wages for 1952 Birth Cohort by Earnings Level

Highest 35 Years of Wage-Indexed Earnings Are in Bold

Year	Age	Index Factor ^a	Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
1973	21	5.847	3,235.48	5,806.14	12,897.61	20,653.90	63,148.28
1974	22	5.519	3,944.63	7,091.47	15,734.19	25,174.71	72,850.64
1975	23	5.135	4,964.03	8,952.98	19,856.11	31,778.64	72,406.60
1976	24	4.804	5,894.78	10,637.20	23,623.45	37,806.38	73,497.32
1977	25	4.532	6,648.25	11,966.85	26,593.00	42,548.80	74,780.11
1978	26	4.199	7,313.08	13,163.54	29,207.98	46,759.36	74,317.10
1979	27	3.861	7,933.58	14,227.26	31,645.67	50,659.67	88,415.85
1980	28	3.542	8,465.44	15,246.65	33,861.76	54,205.40	91,735.72
1981	29	3.218	8,952.98	16,133.09	35,811.91	57,307.92	95,574.24
1982	30	3.05	9,396.19	16,886.56	37,496.13	60,011.54	98,822.41
1983	31	2.908	9,750.77	17,551.38	38,958.75	62,360.59	103,829.56
1973	21	5.847	3,235.48	5,806.14	12,897.61	20,653.90	63,148.28
1984	32	2.747	10,061.02	18,127.56	40,288.40	64,443.71	103,833.40
1985	33	2.635	10,371.27	18,615.10	41,396.44	66,260.90	104,332.71

Year	Age	Index Factor ^a	Very Low Earner	Low Earner	Medium Earner	High Earner	Maximum Earner
1986	34	2.559	10,592.88	19,102.64	42,415.84	67,900.80	107,466.20
1987	35	2.405	10,814.49	19,501.53	43,302.27	69,274.77	105,353.06
1988	36	2.292	11,036.10	19,856.11	44,100.06	70,515.78	103,158.74
1989	37	2.205	11,213.38	20,166.36	44,764.89	71,668.14	105,845.16
1990	38	2.108	11,346.35	20,432.29	45,385.39	72,643.22	108,127.44
1991	39	2.032	11,479.31	20,698.22	45,961.57	73,573.97	108,510.02
1992	40	1.932	11,612.28	20,919.83	46,449.11	74,327.44	107,251.26
1993	41	1.916	11,700.92	21,097.11	46,848.01	74,992.27	110,360.29
1994	42	1.866	11,833.89	21,274.40	47,291.22	75,657.09	113,073.43
1995	43	1.794	11,922.53	21,451.69	47,645.80	76,188.95	109,792.10
1996	44	1.71	12,011.17	21,584.65	47,956.05	76,765.13	107,238.54
1997	45	1.616	12,055.49	21,717.62	48,221.98	77,164.03	105,689.39
1998	46	1.536	12,099.82	21,806.26	48,443.59	77,474.28	105,039.88
1999	47	1.455	12,144.14	21,850.58	48,576.55	77,695.89	105,604.53
2000	48	1.378	12,144.14	21,850.58	48,576.55	77,695.89	105,032.81
2001	49	1.346	12,144.14	21,850.58	48,576.55	77,695.89	108,239.81
2002	50	1.333	12,144.14	21,850.58	48,576.55	77,695.89	113,163.11
2003	51	1.301	12,099.82	21,806.26	48,487.91	77,562.92	113,195.10
2004	52	1.243	12,055.49	21,717.62	48,266.30	77,208.35	109,285.65
2005	53	1.199	11,966.85	21,540.33	47,911.73	76,676.49	107,946.76
2006	54	1.147	11,878.21	21,363.04	47,468.51	75,967.34	108,019.38
2007	55	1.097	11,745.24	21,097.11	46,892.33	75,036.59	106,949.92
2008	56	1.072	11,479.31	20,653.90	45,872.93	73,396.69	109,370.11
2009	57	1.089	11,169.06	20,122.04	44,676.24	71,535.18	116,270.38
2010	58	1.064	10,858.81	19,545.86	43,435.24	69,452.06	113,585.78
2011	59	1.031	10,504.24	18,881.03	41,972.62	67,147.33	110,134.88
2012	60	1.000	10,016.70	18,038.92	40,066.79	64,133.46	110,100.00
2013	61	1.000	9,516.29	17,147.28	38,154.94	61,047.90	113,700.00
Total Indexed Earnings			418,516.66	753,330.22	1,673,668.88	2,678,065.22	4,165,047.67
Highest 35 Years' Indexed Earnings			386,516.41	695,712.04	1,545,756.54	2,473,343.43	3,734,047.63
Average Indexed Monthly Earning's (AIME)			920.28	1,656.46	3,680.37	5,888.91	8,890.59

Source: CRS.

Note: Figures in bold indicate the highest 35 years of wage-indexed earnings.

- a. The index factor is computed by dividing the Social Security Administration's (SSA's) Average Wage Index (AWI) in the year a worker turns 60 by the AWI for each year of earnings. For instance, the index factor for 2010 is computed by dividing the AWI from 2011—the year in which the workers turned 60—by the

AWI from year 2010 (i.e., \$42,979.61/\$41,673.83 or 1.031). Results are displayed to three decimals. See **Table B-1** for AWI values.

Appendix B. Social Security Program Information

Table B-I. Parameters Used to Calculate Social Security Eligibility and Benefits, Select Years

Year	Average Wage Index (AWI)	Annual Change (AWI)	Cost-of-Living Adjustment (COLA) ^a	Contribution and Benefit Base (Taxable Maximum)	First Primary Insurance Amount (PIA) Bend Point ^b	Second PIA Bend Point ^b	Amount Needed to Earn One Quarter of Coverage (Credit) ^c
1951	\$2,799.16	—	—	\$3,600	—	—	\$50
1952	2,973.32	6.22%	—	3,600	—	—	\$50
1953	3,139.44	5.59%	—	3,600	—	—	\$50
1954	3,155.64	0.52%	—	3,600	—	—	\$50
1955	3,301.44	4.62%	—	4,200	—	—	\$50
1956	3,532.36	6.99%	—	4,200	—	—	\$50
1957	3,641.72	3.10%	—	4,200	—	—	\$50
1958	3,673.80	0.88%	—	4,200	—	—	\$50
1959	3,855.80	4.95%	—	4,800	—	—	\$50
1960	4,007.12	3.92%	—	4,800	—	—	\$50
1961	4,086.76	1.99%	—	4,800	—	—	\$50
1962	4,291.40	5.01%	—	4,800	—	—	\$50
1963	4,396.64	2.45%	—	4,800	—	—	\$50
1964	4,576.32	4.09%	—	4,800	—	—	\$50
1965	4,658.72	1.80%	—	4,800	—	—	\$50
1966	4,938.36	6.00%	—	6,600	—	—	\$50
1967	5,213.44	5.57%	—	6,600	—	—	\$50
1968	5,571.76	6.87%	—	7,800	—	—	\$50
1969	5,893.76	5.78%	—	7,800	—	—	\$50
1970	6,186.24	4.96%	—	7,800	—	—	\$50
1971	6,497.08	5.02%	—	7,800	—	—	\$50
1972	7,133.80	9.80%	—	9,000	—	—	\$50
1973	7,580.16	6.26%	—	10,800	—	—	\$50
1974	8,030.76	5.94%	—	13,200	—	—	\$50
1975	8,630.92	7.47%	—	14,100	—	—	\$50
1976	9,226.48	6.90%	8.0%	15,300	—	—	\$50
1977	9,779.44	5.99%	6.4%	16,500	—	—	\$50
1978 ^b	10,556.03	7.94%	5.9%	17,700	—	—	250
1979	11,479.46	8.75%	6.5%	22,900	\$180	\$1,085	260
1980	12,513.46	9.01%	9.9%	25,900	194	1,171	290

Year	Average Wage Index (AWI)	Annual Change (AWI)	Cost-of-Living Adjustment (COLA) ^a	Contribution and Benefit Base (Taxable Maximum)	First Primary Insurance Amount (PIA) Bend Point ^b	Second PIA Bend Point ^b	Amount Needed to Earn One Quarter of Coverage (Credit) ^c
1981	13,773.10	10.07%	14.3%	29,700	211	1,274	310
1982	14,531.34	5.51%	11.2%	32,400	230	1,388	340
1983	15,239.24	4.87%	7.4%	35,700	254	1,528	370
1984	16,135.07	5.88%	3.5%	37,800	267	1,612	390
1985	16,822.51	4.26%	3.5%	39,600	280	1,691	410
1986	17,321.82	2.97%	3.1%	42,000	297	1,790	440
1987	18,426.51	6.38%	1.3%	43,800	310	1,866	460
1988	19,334.04	4.93%	4.2%	45,000	319	1,922	470
1989	20,099.55	3.96%	4.0%	48,000	339	2,044	500
1990	21,027.98	4.62%	4.7%	51,300	356	2,145	520
1991	21,811.60	3.73%	5.4%	53,400	370	2,230	540
1992	22,935.42	5.15%	3.7%	55,500	387	2,333	570
1993	23,132.67	0.86%	3.0%	57,600	401	2,420	590
1994	23,753.53	2.68%	2.6%	60,600	422	2,545	620
1995	24,705.66	4.01%	2.8%	61,200	426	2,567	630
1996	25,913.90	4.89%	2.6%	62,700	437	2,635	640
1997	27,426.00	5.84%	2.9%	65,400	455	2,741	670
1998	28,861.44	5.23%	2.1%	68,400	477	2,875	700
1999	30,469.84	5.57%	1.3%	72,600	505	3,043	740
2000	32,154.82	5.53%	2.5%	76,200	531	3,202	780
2001	32,921.92	2.39%	3.5%	80,400	561	3,381	830
2002	33,252.09	1.00%	2.6%	84,900	592	3,567	870
2003	34,064.95	2.44%	1.4%	87,000	606	3,653	890
2004	35,648.55	4.65%	2.1%	87,900	612	3,689	900
2005	36,952.94	3.66%	2.7%	90,000	627	3,779	920
2006	38,651.41	4.60%	4.1%	94,200	656	3,955	970
2007	40,405.48	4.54%	3.3%	97,500	680	4,100	1,000
2008	41,334.97	2.30%	2.3%	102,000	711	4,288	1,050
2009	40,711.61	-1.51%	5.8%	106,800	744	4,483	1,090
2010	41,673.83	2.36%	0.0%	106,800	761	4,586	1,120
2011	42,979.61	3.13%	0.0%	106,800	749	4,517	1,120
2012	44,321.67	3.12%	3.6%	110,100	767	4,624	1,130
2013	44,888.16	1.28%	1.7%	113,700	791	4,768	1,160
2014	46,481.52	3.55%	1.5%	117,000	816	4,917	1,200

Year	Average Wage Index (AWI)	Annual Change (AWI)	Cost-of-Living Adjustment (COLA) ^a	Contribution and Benefit Base (Taxable Maximum)	First Primary Insurance Amount (PIA) Bend Point ^b	Second PIA Bend Point ^b	Amount Needed to Earn One Quarter of Coverage (Credit) ^c
2015	48,098.63	3.48%	1.7%	118,500	826	4,980	1,220
2016	48,642.15	1.13%	0.0%	118,500	856	5,157	1,260
2017	50,321.89	3.45%	0.3%	127,200	885	5,336	1,300
2018	52,145.80	3.62%	2.0%	128,400	895	5,397	1,320
2019	54,099.99	3.75%	2.8%	132,900	926	5,583	1,360
2020	55,628.60	2.83%	1.6%	137,700	960	5,785	1,410
2021	—	—	1.3%	142,800	996	6,002	1,470
2022			5.9%	147,000	1,024	6,172	1,510

Source: CRS.

Notes: Dashes indicate data not available.

- a. Automatic COLAs became effective in 1975 as part of P.L. 92-336. Prior to this, each COLA was approved through legislation. For more information, see CRS Report 94-803, *Social Security: Cost-of-Living Adjustments*.
- b. Prior to 1978, the Social Security benefit amounts were calculated using a process that coupled wage and price inflation. P.L. 95-216 decoupled price and wage inflation in benefit calculations and instituted the current-law benefit formula.
- c. Prior to 1978, a worker earned a quarter of coverage for each quarter in which he or she earned \$50 in covered employment. P.L. 95-216 stipulated that a quarter of coverage for 1978 would be \$250, and that amount would be indexed annually to the average wage index.

Table B-2. Social Security Benefit Amounts, Full Retirement Age (FRA), and Delayed Retirement Credits (DRCs) by Birth Year

As a Percentage of Primary Insurance Amount (PIA) at Ages 62-70

Year of Birth/Age 62	FRA	DRC	62	63	64	65	66	67	68	69	70
1924/1986	65	3	80	86 2/3	93 1/3	100	103	106	109	112	115
1925-1926/1987-1988	65	3 1/2	80	86 2/3	93 1/3	100	103 1/2	107	107 1/2	114	117 1/2
1927-1928/1989-1990	65	4	80	86 2/3	93 1/3	100	104	108	112	116	120
1929-1930/1991-1992	65	4 1/2	80	86 2/3	93 1/3	100	104 1/2	109	113 1/2	118	122 1/2
1931-1932/1993-1994	65	5	80	86 2/3	93 1/3	100	105	110	115	120	125
1933-1934/1995-1996	65	5 1/2	80	86 2/3	93 1/3	100	105 1/2	111	116 1/2	122	127 1/2

Year of Birth/Age 62	FRA	DRC	62	63	64	65	66	67	68	69	70
1935-1936/1997-1998	65	6	80	86 $\frac{2}{3}$	93 $\frac{1}{3}$	100	106	112	118	124	130
1937/1999	65	6 $\frac{1}{2}$	80	86 $\frac{2}{3}$	93 $\frac{1}{3}$	100	106 $\frac{1}{2}$	113	119 $\frac{1}{2}$	126	132 $\frac{1}{2}$
1938/2000	65, 2 mo.	6 $\frac{1}{2}$	79 $\frac{1}{6}$	85 $\frac{5}{9}$	92 $\frac{2}{9}$	98 $\frac{8}{9}$	105 $\frac{5}{12}$	111 $\frac{11}{12}$	118 $\frac{5}{12}$	124 $\frac{11}{12}$	131 $\frac{5}{12}$
1939/2001	65, 4 mo.	7	78 $\frac{1}{3}$	84 $\frac{4}{9}$	91 $\frac{1}{9}$	97 $\frac{7}{9}$	104 $\frac{2}{3}$	111 $\frac{2}{3}$	118 $\frac{2}{3}$	125 $\frac{2}{3}$	132 $\frac{2}{3}$
1940/2002	65, 6 mo.	7	77 $\frac{1}{2}$	83 $\frac{1}{3}$	90	96 $\frac{2}{3}$	103 $\frac{1}{2}$	110 $\frac{1}{2}$	117 $\frac{1}{2}$	124 $\frac{1}{2}$	131 $\frac{1}{2}$
1941/2003	65, 8 mo.	7 $\frac{1}{2}$	76 $\frac{2}{3}$	82 $\frac{2}{9}$	88 $\frac{8}{9}$	95 $\frac{5}{9}$	102 $\frac{1}{2}$	110	117 $\frac{1}{2}$	125	132 $\frac{1}{2}$
1942/2004	65, 10 mo.	7 $\frac{1}{2}$	75 $\frac{5}{6}$	81 $\frac{1}{9}$	87 $\frac{7}{9}$	94 $\frac{4}{9}$	101 $\frac{1}{4}$	108 $\frac{3}{4}$	116 $\frac{1}{4}$	123 $\frac{3}{4}$	131 $\frac{1}{4}$
1943-1954/2005-2016	66	8	75	80	86 $\frac{2}{3}$	93 $\frac{1}{3}$	100	108	116	124	132
1955/2017	66, 2 mo.	8	74 $\frac{1}{6}$	79 $\frac{1}{6}$	85 $\frac{5}{9}$	92 $\frac{2}{9}$	98 $\frac{8}{9}$	106 $\frac{2}{3}$	114 $\frac{2}{3}$	122 $\frac{2}{3}$	130 $\frac{2}{3}$
1956/2018	66, 4 mo.	8	73 $\frac{1}{3}$	78 $\frac{1}{3}$	84 $\frac{4}{9}$	91 $\frac{1}{9}$	97 $\frac{7}{9}$	105 $\frac{1}{3}$	113 $\frac{1}{3}$	121 $\frac{1}{3}$	129 $\frac{1}{3}$
1957/2019	66, 6 mo.	8	72 $\frac{1}{2}$	77 $\frac{1}{2}$	83 $\frac{1}{3}$	90	96 $\frac{2}{3}$	104	112	120	128
1958/2020	66, 8 mo.	8	71 $\frac{2}{3}$	76 $\frac{2}{3}$	82 $\frac{2}{9}$	88 $\frac{8}{9}$	95 $\frac{5}{9}$	102 $\frac{2}{3}$	110 $\frac{2}{3}$	118 $\frac{2}{3}$	126 $\frac{2}{3}$
1959/2021	66, 10 mo.	8	70 $\frac{5}{6}$	75 $\frac{5}{6}$	81 $\frac{1}{9}$	87 $\frac{7}{9}$	94 $\frac{4}{9}$	101 $\frac{1}{3}$	109 $\frac{1}{3}$	117 $\frac{1}{3}$	125 $\frac{1}{3}$
1960 and later/2022 or later	67	8	70	75	80	86 $\frac{2}{3}$	93 $\frac{1}{3}$	100	116	124	124

Source: CRS.

Notes: If benefits are claimed before reaching FRA (i.e., early retirement), the PIA is reduced five-ninths of 1% for each month before FRA, up to 36 months. If the number of months is greater than 36, then the PIA is further reduced five-twelfths of 1% for each month. The DRC is two-thirds of 1% per month for persons born in 1943 or later. DRCs cannot be earned after attaining age 70.

Appendix C. Auxiliary Benefits

Table C-1. Social Security Benefits for the Worker's Family Members

Basis for Entitlement	Basic Eligibility Requirements	Basic Benefit Amount Before Any Applicable Adjustments
Spouse	At least age 62, or Any age if caring for the child of a retired or disabled worker. The child must be under the age of 16 or disabled, and the child must be entitled to benefits.	50% of worker's PIA
Divorced Spouse (The divorced individual must have been married to the worker for at least 10 years before the divorce became final.)	At least age 62. Must be unmarried. Note: A divorced spouse who is under the age of 62 is not eligible for spousal benefits even if he or she is caring for the child of a retired or disabled worker.	50% of worker's PIA
Aged Widow(er) and Divorced Aged Widow(er) (The divorced individual must have been married to the worker for at least 10 years before the divorce became final.)	At least age 60. Must be unmarried (unless the marriage occurred after attainment of age 60).	100% of worker's PIA ^a
Disabled Widow(er) and Divorced Disabled Widow(er) (The divorced individual must have been married to the worker for at least 10 years before the divorce became final.)	At least age 50 (ages 50-59). Must be unmarried (unless the marriage occurred after attainment of age 50). The qualifying disability must have occurred: (1) before or within seven years of the worker's death; (2) within seven years of having been previously entitled to benefits on the worker's record as a widow(er) with a child in his or her care; or (3) within seven years of having been previously entitled to benefits as a disabled widow(er) that ended because the qualifying disability ended (whichever is later).	71.5% of worker's PIA ^a Disabled widow(er)s and divorced disabled widow(er)s ages 50-59 receive the same rate of reduction set for widow(er)s at age 60 (28.5% of the worker's PIA) regardless of their age at the time of entitlement

Basis for Entitlement	Basic Eligibility Requirements	Basic Benefit Amount Before Any Applicable Adjustments
Widowed Mother or Father (Young Widow(er) with Child)	Surviving spouse of any age who is caring for the deceased worker's child. The child must be under the age of 16 or disabled, and the child must be entitled to benefits. Must be unmarried. Must not be entitled to widow(er)'s benefits. Note: In the case of a surviving divorced parent, the child must be his or her natural or legally adopted child. The 10-year marriage requirement that applies to divorced spouses under other circumstances does not apply.	75% of deceased worker's PIA
Child	A dependent, unmarried child of a retired, disabled, or deceased worker. The child must be: (1) under the age of 18, (2) a full-time elementary or secondary student under the age of 19, or (3) a disabled person aged 18 or older whose disability began before age 22. The term <i>child</i> refers to a biological child, adopted child, stepchild, or, in some cases, grandchild of the worker.	50% of worker's PIA for child of a retired or disabled worker 75% of deceased worker's PIA for child of a deceased worker
Dependent Parent of a Deceased Worker	At least age 62. Must not have married since the worker's death. Must have been receiving at least one-half of his or her support from the worker at the time of the worker's death (or, if the worker had a period of disability that continued until death, at the beginning of the period of disability).	82.5% of deceased worker's PIA if one parent is entitled to benefits 75% of deceased worker's PIA (for each parent) if two parents are entitled to benefits

Source: CRS. For more information on auxiliary benefits, see CRS Report R41479, *Social Security: Revisiting Benefits for Spouses and Survivors*.

Notes: The family relationship requirement for entitlement to benefits based on the worker's record may be met in alternative ways. For example, the relationship requirement can be met if, under state law as interpreted by the courts of the state, the applicant would be able to inherit a share of the worker's personal property if the worker were to die without leaving a will. The table shows the minimum eligibility age for each type of benefit (i.e., the age at which benefits are first payable on a reduced basis). The maximum family benefit may apply, reducing the benefit payable to each family member (excluding the worker) on a proportional basis. In the case of a retired or deceased worker, the maximum family benefit varies from 150% to 188% of the worker's PIA. In the case of a disabled worker, the maximum family benefit is equal to the lesser of 85% of the worker's AIME or 150% of the worker's PIA but no less than 100% of the worker's PIA. Other benefit adjustments may apply.

- a. A worker's claiming age affects the widow(er) benefit. If a worker was receiving a reduced benefit due to claiming benefits *before* the full retirement age, the widow(er) benefit cannot exceed the worker's reduced benefit amount. Alternatively, if a worker was entitled (or would have been entitled) to a higher benefit due to claiming benefits *after* the full retirement age, the worker's PIA—adjusted to take into account the delayed retirement credit—is used to compute the widow(er) benefit, thereby increasing the benefit.

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