

# Calculation OF THE RETIREMENT PENSION



*An example showing how a retirement pension is calculated*

Suppose a person born in November 1937 becomes entitled to a retirement pension in December 2002, that is, in the month following his or her 65<sup>th</sup> birthday. How much will the retirement pension be if the person's Statement of Participation shows the earnings entered in column I of the table on the back of this leaflet?

A retirement pension corresponds to 25% of a worker's average monthly adjusted pensionable earnings.

The pension for a person under age 65 is reduced, for life, according to an actuarial factor of 0,5% a month, up to a maximum reduction of 30% (at age 60). If a pension begins after age 65, it is increased in a similar manner until the person reaches age 70.

A retirement pension may be increased in January each year if it is not already the maximum payable and the beneficiary made contributions to the Plan in the preceding year.

Disability pensions and surviving spouse's pensions are based on the retirement pension that would have been paid to the contributor, without taking into account the actuarial increase or decrease. The death benefit is a fixed, lump-sum payment of 2 500 \$.

## The pension calculation has three steps:

- **First step:** adjusting pensionable earnings
- **Second step:** determining the months and earnings to be used in the calculation
- **Third step:** actually calculating the pension

## First step

### Adjusting pensionable earnings

Before calculating the average monthly pensionable earnings, past yearly earnings must be adjusted to their current value by multiplying each year's pensionable earnings (shown in column I of the table) by the average of the maximum pensionable earnings (AMPE) for the year in which the pension begins and the 4 preceding years. The result of that operation is then divided by the maximum pensionable earnings (MPE) for the year being adjusted (shown in column II of the table).

For 2002, the person's earnings for 1966 ( in our example, 3 267 \$ ) would be adjusted as follows:

$$\frac{3\,267 \$ \times \text{AMPE-5 for 2002}}{\text{MPE for 1966}} = \frac{3\,267 \$ \times 37\,860 \$}{5\,000 \$} = 24\,738 \$$$

where

**AMPE-5 for 2002 =**

$$(36\,900 \$ + 37\,400 \$ + 37\,600 \$ + 38\,300 \$ + 39\,100 \$) \div 5 = 37\,860 \$$$

After adjustment, the earnings of 3 267 \$ for 1966 are valued at 24 738 \$ in current (2002) dollars.

A similar adjustment must be made for each of the years in question. The results are shown in column III of the table.

## Second step

### Determining the months and earnings to be used for the calculation

A person's contributory period begins on the first day of the month that follows the month of his or her 18th birthday, but no earlier than 1 January 1966, and ends at the end of the earliest of the following months:

- the month preceding the one in which a retirement pension becomes payable;
- the one in which the beneficiary reaches age 70;
- the month in which the beneficiary dies.

In our example, the contributory period begins on 1 January 1966 and ends at the end of November 2002, that is, the month which precedes the month in which payment of the pension starts, for a total contributory period of 443 months. (See column V of the table.)

All the pensionable employment earnings during that period can be used in calculating the pension. However, the *Act respecting the Québec Pension Plan* allows the exclusion of the earnings made during 15% of the months in the contributory period. The months excluded are those in which the person's earnings are the lowest.

In the example, a total of 67 months can be excluded (443 months x 15% = 67), representing earnings of 115 378 \$, as shown in columns VI and VII of the table. This means that the pension will be calculated on the basis of the best 376 months (443 - 67 = 376) which represent earnings of 1 141 745 \$.



## Third step

### Actually calculating the pension

In calculating the average monthly earnings, we must exclude the 67 months mentioned above from the contributory period and at the same time, subtract from the person's total earnings (1 257 123 \$) the earnings for those 67 months of lowest earnings. As shown in column IV of the table, those months are the 12 months of 1979, 1972, 1968, 1967 and 1966 and 7 months of 1969, which account for earnings of 115 378 \$. This gives the following result:

$$1\,257\,123\ \$ - 115\,378\ \$ = 1\,141\,745\ \$$$

The monthly retirement pension corresponds to 25% of the average monthly earnings for the best 376 months; it is calculated as follows:

$$\left( \frac{25}{100} \times 1\,141\,745\ \$ \right) \div 376 = 759,14\ \$$$

In our example, payment of the monthly retirement pension of 759,14 \$ begins in December 2002. If the contributor had contributed the maximum amount for the 376 best months, that is, for 31 years and 4 months, he or she would receive the maximum payable in 2002, that is, 788,75 \$ a month.

If the person in our example had reached the age of:

- **62 years** (36 months before age 65), the pension would be 622,49 \$ a month, according to the following formula:

$$759,14\ \$ - \left[ \left( \frac{36 \times 0,5}{100} \right) \times 759,14\ \$ \right] = 622,49\ \$$$

- **67 years** (24 months after age 65), the pension would be 850,24 \$ a month, according to the following formula:

$$759,14\ \$ + \left[ \left( \frac{24 \times 0,5}{100} \right) \times 759,14\ \$ \right] = 850,24\ \$$$

### Table of earnings

Year	I Employment earnings \$	II Maximum pen- sionable earnings \$	III Adjusted an- nual earnings \$	IV Adjusted month- ly earnings \$	V Months in the contributory period	VI Months excluded (15%)	VII Earnings ex- cluded 15%
1966	3 267*	5 000	24 738	2 061	12	12	24 738
1967	3 332*	5 000	25 230	2 103	12	12	25 230
1968	3 659*	5 100	27 163	2 264	12	12	27 163
1969	3 899*	5 200	28 388	2 366	12	7	16 560
1970	4 225*	5 300	30 181	2 515	12		
1971	4 422*	5 400	31 003	2 584	12		
1972	0*	5 500	0	0	12	12	0
1973	5 900	5 900	37 860	3 155	12		
1974	6 600	6 600	37 860	3 155	12		
1975	7 400	7 400	37 860	3 155	12		
1976	8 300	8 300	37 860	3 155	12		
1977	9 300	9 300	37 860	3 155	12		
1978	10 400	10 400	37 860	3 155	12		
1979	6 702*	11 700	21 687	1 807	12	12	21 687
1980	13 100	13 100	37 860	3 155	12		
1981	14 700	14 700	37 860	3 155	12		
1982	16 500	16 500	37 860	3 155	12		
1983	18 500	18 500	37 860	3 155	12		
1984	20 800	20 800	37 860	3 155	12		
1985	23 400	23 400	37 860	3 155	12		
1986	23 466*	25 800	34 435	2 870	12		
1987	24 113*	25 900	35 248	2 937	12		
1988	25 232*	26 500	36 049	3 004	12		
1989	26 101*	27 700	35 675	2 973	12		
1990	27 332*	28 900	35 806	2 984	12		
1991	29 954*	30 500	37 182	3 099	12		
1992	31 250*	32 200	36 743	3 062	12		
1993	31 782*	33 400	36 026	3 002	12		
1994	32 751*	34 400	36 045	3 004	12		
1995	34 900	34 900	37 860	3 155	12		
1996	33 333*	35 400	35 649	2 971	12		
1997	35 800	35 800	37 860	3 155	12		
1998	33 825*	36 900	34 705	2 892	12		
1999	34 283*	37 400	34 705	2 892	12		
2000	37 600	37 600	37 860	3 155	12		
2001	38 300	38 300	37 860	3 155	12		
2002	35 842 #	39 100	34 705	3 155	11		
<b>TOTAL</b>			<b>1 257 123</b>		<b>443</b>	<b>67</b>	<b>115 378</b>

Earnings of 115 378 \$ (for the 67 months of lowest earnings) must be subtracted from 1 257 123 \$, which leaves total earnings of 1 141 745 \$ for the remaining 376 months.

\* The asterisk indicates that the contributor did not reach the maximum pensionable earnings for the year.

# The pound sign indicates that the annual maximum pensionable earnings have been adjusted to correspond to the 11 months during which the contributor could contribute during the last year of work.