(ii) the probabilities of being a contributor at pertinent ages are as follows:

Age Last Birthday	*Males*	*Females*
56–59	0.72	0.18
60–64	0.81	0.24
65	0.49	0.13
66	0.46	0.11
67	0.43	0.09
68	0.40	0.08
69	0.37	0.07

(iii) a worker will elect to take his pension as soon as possible after ceasing to contribute—keeping in mind that the minimum ages at which age retirement pensions are available are 68 in 1967, 67 in 1968, 66 in 1969 and 65 in 1970 and later years.

The method of development is described in the following paragraphs by a theoretical step-by-step approach. In practice, the calculations were considerably simplified by the development of appropriate commutation type functions.

The first step in the development was the calculation of a series of $P_{(x,z,z)}$ factors—representing the probability that a worker aged x on January 1, 1966, will cease contributing at age y and will elect to take his age retirement pension at age z. Two cases had to be taken into account, namely,

(i) if z is the youngest age at which an age retirement pension can be taken, consistent with x and y, $P_{(yx,z,)}$ is the probability of ceasing contributions at age y, that is, the difference between the probability of being a contributor at age y-1 last birthday and the probability of being a contributor at age y last birthday (for example, for males, $P_{(64,66,67)} = 0.49 - 0.46 = 0.03$), and

(ii) if z is not the youngest age at which an age retirement pension can be taken, consistent with x and y, $P_{(x,y,z)}$ is zero.

The next step was the calculation of a series of $A_{(x,y,z)}$ factors—representing the average initial annual amount of pension payable to a worker aged x on January 1, 1966, who contributes until age y and who elects to take his pension at age z. This was done as follows:

(i) pensionable earnings for each year between ages x and y were taken to be the applicable modified average earnings rate;

(ii) the annual earnings ratio for each year was computed as pensionable earnings divided by the contributory earnings upper limit;

(iii) average earnings ratios were computed as one-tenth of the sum of the applicable annual earnings ratios;

(iv) $A_{(x,y,z)}$ was computed as 25% of the average of the three contributory earnings upper limits ending with the year in which pension commences multiplied by the average earnings ratio.

The next step involved the calculation of a series of $P_{(x,y,z)}.A_{(x,y,z)}.(1.015)^{w-z}$ factors. Such a factor, if applied to the population aged w last birthday in the year 1966+w−x, would yield the total amount of benefit payable to workers aged w last birthday in the year 1966+w−x who cease contributing at age y and elect to take pension at age z. By summation of all such factors for a given x and w, an aggregate factor was obtained which, when applied to the population aged w last birthday in the year 1966+w−x, would yield the total amount of benefit payable to workers aged w last birthday in the year 1966+w−x. Such aggregate factors were calculated for all relevant values of x and w.