



CONTRIBUTIONS AGENCY

**SUPPLEMENT TO NI GUIDANCE FOR SOFTWARE
DEVELOPERS**

(Examples of NI Calculations)

February 1999

Further examples of calculations will be issued as appropriate, and when yearly rates are issued by the Government.

This Guidance/Supplement will not transfer any liability for errors to the Contributions Agency

IMPORTANT NOTE:

This Supplement to the 'NI Guidance for Software Developers' is only a *guide* for the development of software products incorporating budget changes. It has not been compiled as a definitive document and should only be used in conjunction with the information contained within the Employer's Annual Pack. Therefore developers should continue to create their own formulae for scenarios not covered by this supplement.

INTRODUCTION

This document supplements the 'NI Guidance for Software Developers' issued in September 1998 and sets out examples of NI calculations designed as an aid for software developers. We have tried to include a variety of scenarios from the very straightforward calculations to the more difficult Directors calculations. No doubt there are some situations not covered but we will continue to work on additional scenarios and issue as appropriate.

There is also specific guidance on how to calculate the Earnings Threshold. For those paid in multiples of weeks or months this should be calculated as a fraction of the Annual Earnings Threshold ie. $\text{£}4335 \div 52/12 \times \text{the number of weeks/months}$ (rounded up to the next whole pound).

The Employers Helpline telephone number (0345 143 143) should still be used for general enquiries. However, if you wish to give any feedback in the form of suggestions for incorporation of additional information, or comments on the information in this document or the 'NI Guidance for Software Developers' please write to:-

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Glossary of Terms

GP	Gross Pay for NI purposes
w/m	Week / Month
p	Number of weeks / months in pay period
LEL	Lower Earnings Limit
UEL	Upper Earnings Limit
EER	Employee Percentage Rate
(R)	Round at this point
ET	Earnings Threshold
ERR	Employer Percentage Rate
RR	Employer Rebate for Contracted-Out Schemes
GP _{td}	Gross Pay for NI purposes to date
LEL _a	Annual Lower Earnings Limit
UEL _a	Annual Upper Earnings Limit
EE _{pd}	Employee Contributions paid to date
ER _{pd}	Employer Contributions paid to date
ET _a	Annual Earnings Threshold
GP _c	Gross Pay for NI purposes before change in status
GP _{ac}	Gross Pay for NI purposes after change in status

IMPORTANT NOTE:

The formulae contained within the 'NI Guidance for Software Developers' which although is not exhaustive, can be used for Employee, Employer and Director cases with no change in status. When dealing with Director cases which involve a change in status during the annual earnings period, the formulae shown in the guidance should be adapted as necessary. Therefore, the formulae quoted in this document for such cases, relate only to the situations mentioned and any variance may require a change in formulae.

Example 1

An employee earns £70 pw and pays standard not contracted-out National Insurance Contributions.

Employee

Cat A

$$[((GP_{w/m} - LEL_{w/m}) - (GP_{w/m} - UEL_{w/m}^*)) \times EER (R)] \times p = \text{Employee Contributions}$$

* If answer is negative, treat as zero

ie:

$$[(£70 - £66) - (£70 - £500^*)] \times 10\% (R)] \times 1 = \underline{\underline{£0.40 \text{ Employee Contribution}}}$$

Employer

Cat A

$$[(GP_{w/m} - ET_{w/m}^*) \times ERR (R)] \times p = \text{Employer Contribution}$$

*. 1. If calculation is for multiples of weeks/months ET should be calculated as fraction of Annual amount
eg. £4335 ÷ 52/12 x number of weeks/months (rounded up to next whole pound)

2. If answer is negative, no NI due

ie:

$$[(£70 - £83^*) \times 12.2\% (R)] \times 1 = \underline{\underline{NIL \text{ Employer Contribution}}}$$

Employee Contribution	£0.40
Employer Contribution	NIL
Rebate	n/a

Example 2

An employee earns £100 pw and pays standard contracted-out NIC (COSR scheme).

Employee

Cat D

$$[((GP_{w/m} - LEL_{w/m}) - (GP_{w/m} - UEL_{w/m}*)) \times EER (R)] \times p = \text{Employee Contributions}$$

* If answer is negative, treat as zero

ie:

$$[(£100 - £66) - (£100 - £500*)] \times 8.4\% (R) \times 1 = \underline{\underline{£2.86 \text{ Employee Contribution}}}$$

Employer

Cat D

$$[(ET* - LEL) \times RR (R)] \times p = \text{Rebate}$$

$$[((GP - ET*) \times (ERR - RR)) (R)] \times p = \text{Employer Contributions}$$

* If calculation is for multiples of weeks/months ET should be calculated as fraction of Annual amount eg.
£4335 ÷ 52/12 x number of weeks/months (rounded up to next whole pound)

ie:

$$[(£83 - £66) \times 3\% (R)] \times 1 = \underline{\underline{£0.51 \text{ Rebate}}}$$

$$[(£100 - £83) \times (12.2\% - 3\%)] (R) \times 1 = \underline{\underline{£1.56 \text{ Employer Cont}}}$$

Employee Contribution	D	£2.86
Employer Contribution	D	£1.56
Rebate		£0.51

Example 3

An employee earns £80 pw and pays contracted-out NIC (COSR scheme).

Employee

Cat D

$$[((GP_{w/m} - LEL_{w/m}) - (GP_{w/m} - UEL_{w/m}^*)) \times EER (R)] \times p = \text{Employee Contributions}$$

* If answer is negative, treat as zero

ie:

$$[(£80 - £66) - (£80 - £500^*)] \times 8.4\% (R) \times 1 = \underline{\underline{£1.18 \text{ Employee Contribution}}}$$

Employer

Cat D

$$[(GP_{w/m} - LEL_{w/m}) \times RR (R)] \times p = \text{Rebate}$$

ie:

$$[(£80 - £66) \times 3\% (R)] \times 1 = \underline{\underline{£0.42 \text{ Rebate}}}$$

Employee Contribution	D	£1.18
Employer Contribution	D	Nil
Rebate		£0.42

Example 4

An employee earns £510 pw and pays standard contracted-out NIC (COMP scheme).

Employee

Cat F

$$[((GP_{w/m} - LEL_{w/m}) - (GP_{w/m} - UEL_{w/m}*)) \times EER (R)] \times p = \text{Employee Contributions}$$

* If answer is negative, treat as zero

ie:

$$[(£510 - £66) - (£510 - £500*)] \times 8.4\% (R) \times 1 = \underline{\underline{£36.46 \text{ Employee Contribution}}}$$

Employer

Cat F

$$[(ET* - LEL) \times RR (R)] \times p = \text{Rebate}$$

$$[((UEL - ET*) \times (ERR - RR)) (R) + ((GP - UEL) \times ERR) (R)] \times p = \text{Employer Contributions}$$

* If calculation is for multiples of weeks/months ET should be calculated as fraction of Annual amount eg.
£4335 ÷ 52/12 x number of weeks/months (rounded up to next whole pound)

ie:

$$[(£83 - £66) \times 0.6\% (R)] \times 1 = \underline{\underline{£0.10 \text{ Rebate}}}$$

$$[(£500 - £83) \times (12.2\% - 0.6\%)] (R) + [(£510 - £500) \times 12.2\% (R)] \times 1 = \underline{\underline{£49.59 \text{ Employer Cont}}}$$

Employee Contribution	F	£36.46
Employer Contribution	F	£49.59
Rebate		£0.10

Example 5

An employee earns £425 for a 2 week work period and pays reduced rate not contracted-out NIC.

Employee

Cat B

$$\frac{GP}{p} = GP_{w/m}$$

$$[((GP_{w/m} - LEL_{w/m}) - (GP_{w/m} - UEL_{w/m}*)) \times EER(R)] \times p = \text{Employee Contributions}$$

* If answer is negative, treat as zero

ie:

$$\frac{£425}{2} = £212.50$$

$$[(£212.50 - £66) - (£212.50 - £500*)] \times 3.85\%(R) \times 2 = \underline{\underline{£11.28 \text{ Employee Contribution}}}$$

Employer

Cat B

$$\frac{GP}{p} = GP_{w/m}$$

$$[(GP_{w/m} - ET_{w/m}*) \times ERR(R)] \times p = \text{Employer Contribution}$$

*. 1. If calculation is for multiples of weeks/months ET should be calculated as fraction of Annual figure eg.

$$£4335 \div 52/12 \times \text{number of weeks/months (rounded up to next whole pound)}$$

2. If answer is negative, no NI due

ie:

$$\frac{£425}{2} = £212.50$$

$$[(£212.50 - £83*) \times 12.2\%(R)] \times 2 = \underline{\underline{£31.60 \text{ Employer Contribution}}}$$

Employee Contribution	B	£11.28
Employer Contribution	B	£31.60
Rebate		n/a

Example 6

A Director for the whole of the tax year, earns £30,000 per annum and pays contracted-out NIC (COSR scheme).

Employee:

Cat D

$$[((GP_{td} - LELa) - (GP_{td} - UELa^*)) \times EER (R)] - EE_{pd} = \text{Employee NIC due.}$$

* If answer is negative, treat as zero.

ie:

$$[(£30,000 - £3,432) - (£30,000 - £26,000^*)] \times 8.4\%(R)] - 0 = \underline{\underline{£1,895.71}}$$

Employer:

Cat D

$$[(ET_a - LELa) \times RR (R)] - \text{Rebate prev claimed} = \text{Rebate due this period}$$

$$[(UEL_a - ET_a) \times (ERR - RR) (R) + ((GP_{td} - UEL_a) \times ERR (R))] - ER_{pd} = \text{Employer Contributions}$$

ie:

$$[(£4,335 - £3,432) \times 3\%(R)] - 0 = \underline{\underline{£27.09 \text{ Rebate}}}$$

$$[(£26,000 - £4,335) \times (12.2\% - 3\%) (R) + ((£30,000 - £26,000) \times 12.2\%(R))] - ER_{pd} = \underline{\underline{£2,481.18}}$$

Employee Contribution	D	£1,895.71
Employer Contribution	D	£2,481.18
Employer Rebate		£27.09

Example 7

A director for the whole of the tax year and earned £30,000 per annum and pays reduced rate contracted-out contributions (COSR scheme).

Employee

Cat E

$$[((GP_{td} - LELa) - (GP_{td} - UELa^*)) \times ERR (R)] - EE_{pd} = \text{Employee Contribution}$$

* If answer is negative, treat as zero.

ie:

$$[(£30,000 - £3,432) - (£30,000 - £26,000^*)] \times 3.85\% (R) - 0 = \underline{\underline{£868.87}}$$

Employer

Cat E

$$[(ET_a - LELa) \times RR (R)] - \text{Rebate Prev Claimed} = \text{Rebate due this period}$$

$$[(UEL_a - ET_a) \times (ERR - RR) (R) + ((GP_{td} - UEL_a) \times ERR) (R)] - ER_{pd} = \text{Employer Contribution}$$

ie:

$$[(£4,335 - £3,432) \times 3\% (R) = \underline{\underline{£27.09}}$$

$$[(£26,000 - £4,335) \times (12.2\% - 3\%) (R) + ((£30,000 - £26,000) \times 12.2\%) (R)] - 0 = \underline{\underline{£2,481.18}}$$

Employee Contributions	E	£868.87
Employer Contributions	E	£2,481.18
Employer Rebate		£27.09

Example 8

A director first appointed on 6th December 1999 and earns £30,000 from the date of appointment to the end of the tax year. He pays standard not contracted-out NIC.

$$\begin{aligned} \text{Pro-rata Annual LEL} &= \quad \text{£66} \quad \times 18 \text{ (weeks)} = \text{£1,188} \\ \text{Pro-rata Annual UEL} &= \quad \text{£500} \quad \times 18 \quad \quad \quad = \text{£9,000} \\ \text{Pro-rata Annual ET} &= \quad \text{£4335} \quad \times 18 \div 52 \quad = \text{£1,501 (rounded up to next whole pound)} \end{aligned}$$

Employee

Cat A

$$[((\text{GP}_{td} - \text{LEL}_a) - (\text{GP}_{td} - \text{UEL}_a^*)) \times \text{EER}(\text{R})] - \text{EE}_{pd} = \text{Employee Contributions}$$

*If answer is negative, treat as zero.

ie:

$$[(\text{£30,000} - \text{£1,188}) - (\text{£30,000} - \text{£9,000}^*)] \times 10\%(\text{R}) - 0 = \underline{\underline{\text{£781.20}}}$$

Employer

Cat A

$$[(\text{GP}_{td} - \text{ET}_a^*) \times \text{ERR}(\text{R})] - \text{ER}_{pd} = \text{Employer Contributions}$$

*. 1. If calculation is for multiples of weeks ET should be calculated as fraction of Annual figure eg.
£4335 ÷ 52 x number of weeks (rounded up to next whole pound)

2. If answer is negative, no NI due

ie:

$$[(\text{£30,000} - \text{£1,501}^*) \times 12.2\%(\text{R})] - 0 = \underline{\underline{\text{£3,476.88}}}$$

Employee Contribution	A	£781.20
Employer Contribution	A	£3,476.88
Employer Rebate		n/a

Example 9

A Director for the whole of the tax year and has an Appropriate Personal Pension (APP). He joins the Company's contracted-out salary related (COSR) occupational pension scheme on 1st August 1999. Earnings paid before the change are £5,000 and earnings paid after the change are £25,000. The APP earnings take priority over the contracted-out earnings.

Employee

Cat A

$$[((GP_c - LEL_a) - (GP_c - UEL_a^*)) \times EER (R)] - EE_{pd} = \text{Employee Contribution due this period}$$

*If answer is negative, treat as zero

ie:

$$[((£5,000 - £3,432) - (£5,000 - £26,000^*)) \times 10\% (R)] - 0 = \underline{\underline{£156.80}}$$

Cat D

$$[((GP_{td} - GP_c) - (GP_{td} - UEL_a^*)) \times EER (R)] - EE_{pd} = \text{Employee Contribution due this period}$$

*If answer is negative, treat as zero

ie:

$$[((£30,000 - £5,000) - (£30,000 - £26,000^*)) \times 8.4\% (R)] - 0 = \underline{\underline{£1,764.00}}$$

Employer

Cat A

$$[((GP_c - ET_a^*) \times ERR (R)] - ER_{pd} = \text{Employer Contributions due this period}$$

*If answer is negative, no NI due

ie:

$$[((£5,000 - £4,335) \times 12.2\% (R)] - 0 = \underline{\underline{£81.13}}$$

Cat D

$$[((GP_{td} - GP_c) - (GP_{td} - UEL_a)) \times (ERR - RR) + ((GP_{td} - UEL_a) \times ERR (R))] - ER_{pd} = \text{Employer contributions due this period}$$

ie:

$$[((£30,000 - £5,000) - (£30,000 - £26,000)) \times (12.2\% - 3\%) + ((£30,000 - £26,000) \times 12.2\% (R))] - 0 = \underline{\underline{£2,420.00}}$$

Employee Contribution	A	£156.80
	D	£1,764.00
Employer Contribution	A	£81.13
	D	£2,420.00

Example 10

A director for the whole tax year and is paying reduced rate NIC. Her marriage ends in divorce on 17th Aug 1999 and she earned £10,000 before 17th Aug and £20,000 after (COSR scheme).

Employee

Cat E

$$[((GP_c - LEL_a) - (GP_c - UEL_a^*)) \times EER(R)] - EE_{pd} = \text{Employee Conts due this Period}$$

*If answer is negative, treat as zero

ie:

$$[(£10,000 - £3,432) - (£10,000 - £26,000^*)] \times 3.85\%(R)] - 0 = \underline{\underline{£252.87}}$$

Cat D

$$[((GP_{td} - GP_c) - (GP_{td} - UEL_a^*)) \times EER(R)] - EE_{pd} = \text{Employee Conts due this Period}$$

*If answer is negative, treat as zero

ie:

$$[(£30,000 - £10,000) - (£30,000 - £26,000^*)] \times 8.4\%(R)] - 0 = \underline{\underline{£1,344.00}}$$

Employer

Cat E

$$[(ET_a - LEL_a) \times RR(R)] - \text{Rebate Prev Claimed} = \text{Rebate due this period}$$

$$[((GP_c - ET_a) \times (ERR - RR))(R)] - ER_{pd} = \text{Employer Contribution due this period}$$

ie:

$$[(£4,335 - £3,432) \times 3\%(R)] - 0 = \underline{\underline{£27.09}}$$

$$[(£10,000 - £4,335) \times (12.2\% - 3\%)(R)] - 0 = \underline{\underline{£521.18}}$$

Cat D

$$[((GP_{td} - GP_c) - (GP_{td} - UEL_a) \times (ERR - RR)) + ((GP_{td} - UEL_a) \times ERR)(R)] - ER_{pd} = \text{Employer Contributions due this period}$$

ie:

$$[(£30,000 - £10,000) - (£30,000 - £26,000) \times (12.2\% - 3\%) + ((£30,000 - £26,000) \times 12.2\%)(R)] - 0 = \underline{\underline{£1,960.00}}$$

Employee Contribution	E	£252.87
	D	£1,344.00
Employer Contribution	E	£521.18
	D	£1,960.00
Rebate		£27.09

Example 11

A director for the whole of the year and was 65 on the 15th Aug 1999. He earned £15,000 before the 15th Aug and £15,000 after. He pays standard contracted-out contributions (COMP scheme).

Employee

Cat F

$[(GP_c - LEL_a) - (GP_c - UEL_a^*)] \times EER (R)] - EE_{pd} = \text{Employee Contributions due this period}$

*If answer is negative, treat as zero

ie:

$[(£15,000 - £3,432) - (£15,000 - £26,000^*)] \times 8.4\% (R)] - 0 = \underline{£971.71}$

Cat C

Nil Employee Contributions

Employer

Cat F

$[(ET_a - LEL_a) \times RR (R)] - \text{Rebate Prev Claimed} = \text{Rebate due this period}$

$[(GP_{td} - ET_a) \times (ERR - RR) (R)] - ER_{pd} = \text{Employer Contribution due this period}$

ie:

$[(£4,335 - £3,432) \times 0.6\% (R)] - 0 = \underline{£5.42}$

$[(£15,000 - £4,335) \times (12.2\% - 0.6\%)] (R)] - 0 = \underline{£1,237.14}$

Cat C

$[(GP_{td} - GP_c) \times ERR (R)] - ER_{pd} = \text{Employer Conts due this period}$

ie:

$[(£30,000 - £15,000) \times 12.2\% (R)] - 0 = \underline{£1,830.00}$

Employee Contribution	F	£971.71
	C	Nil
Employer Contribution	F	£1,237.14
	C	£1,830.00
Rebate		£5.42

Example 12

A director first appointed on 5th May 1999 and has an Appropriate Personal Pension (APP). He joined his company's contracted-out salary related occupational pension scheme on 11th Nov 1999 and reaches 65 on 15th January 2000. He earns £15,000 from 5th May 1999 to 11th Nov 1999, £10,000 from 11th Nov 1999 to 15th Jan 2000 and £5,000 from 15th Jan 2000 to the end of the tax year. The APP earnings take priority over the contracted-out earnings (COSR scheme). There are 48 tax weeks left in the 99/2000 tax year from 5th May 1999 to 5th April 2000.

Pro Rata LEL 48 x £66 = £3,168 Pro Rata UEL 48 x £500 = £24,000
Pro Rata ET 48 ÷ 52 x £4335 (rounded up to next whole pound) = £4,002

Employee

Cat A

$[((GP_c - LEL_a) - (GP_c - UEL_a^*)) \times EER (R)] - EE_{pd} = \text{Employee contributions due this period}$

*If answer is negative, treat as zero

ie:

$[((£15,000 - £3,168) - (£15,000 - £24,000^*)) \times 10\% (R)] - 0 = \underline{\underline{£1,183.20}}$

Cat D

$[((GP_{td} - GP_c) - (GP_{td} - UEL_a^*)) \times EER (R)] - EE_{pd} = \text{Employee contributions due this period}$

*If answer is negative, treat as zero

$[((£25,000 - £15,000) - (£25,000 - £24,000^*)) \times 8.4\% (R)] - 0 = \underline{\underline{£756.00}}$

Cat C

Nil Employee Contributions

Employer

Cat A

$[(GP_c - ET_a^*) \times ERR (R)] = \text{Employer contributions due this period}$

*. 1. If calculation is for multiples of weeks ET should be calculated as fraction of Annual figure as shown above.

2. If answer is negative, no NI due

ie:

$[(£15,000 - £4,002^*) \times 12.2\% (R)] = \underline{\underline{£1,341.76}}$

Cat D

$[(((GP_{td} - GP_c) - (GP_{td} - UEL_a)) \times (ERR - RR)) + ((GP_{td} - UEL_a) \times ERR (R))] =$ Employer contributions due this period

ie:

$[(((£25,000 - £15,000) - (£25,000 - £24,000)) \times (12.2\% - 3\%)) + ((£25,000 - £24,000) \times 12.2\% (R))] =$
£950.00

Cat C (Not Contracted-out)

$[((GP_{td} - GP_c) \times ERR) (R)] =$ Employer Contributions due this period

$[((£30,000 - £25,000) \times 12.2\% (R))] =$ **£610.00**

Employee Contribution	A	£1,183.20
	D	£756.00
	C	Nil
Employer Contribution	A	£1,341.76
	D	£950.00
	C	£610.00
Rebate		Nil

Example 13

A director for the whole of the tax year and joins the company's contracted-out salary related occupational pension scheme on 1st May 1999. He earned £4,000 before 1st May 1999 and £24,000 after. He does not have an Appropriate Personal Pension and therefore the contracted-out contributions take priority.

Employee

Cat A

$[(GP_c - (GP_{td} - UEL_a)) \times EER (R)] = \text{Employee contributions due this period}$

ie:

$$[(£4,000 - (£28,000 - £26,000)) \times 10\% = \underline{\underline{£200.00}}$$

Cat D

$[((GP_{ac} - LEL_a) - (GP_{ac} - UEL_a^*)) \times EER (R)] = \text{Employee contributions due this period}$

*If answer is negative, treat as zero

ie:

$$[((£24,000 - £3,432) - (£24,000 - £26,000^*)) \times 8.4\% (R)] = \underline{\underline{£1,727.71}}$$

Employer

Cat A

$[GP_c \times ERR (R)] = \text{Employer contributions due this period}$

ie:

$$[£4,000 \times 12.2\% (R)] = \underline{\underline{£488.00}}$$

Cat D

$[(ET_a - LEL_a) \times RR (R)] = \text{Rebate due this period}$

$[((GP_{ac} - ET_a) \times (ERR - RR)) (R)] = \text{Employer contributions due this period}$

ie:

$$[((£4,335 - £3,432) \times 3\%) (R)] = \underline{\underline{£27.09}}$$

$$[((£24,000 - £4,335) \times (12.2\% - 3\%)) (R)] = \underline{\underline{£1,809.18}}$$

Employee Contribution	A	£200.00
	D	£1,727.71
Employer Contribution	A	£488.00
	D	£1,809.18
Rebate		£27.09