VOCALINK

mastercard

Validating Account Numbers

UK Modulus Checking

VERSION HISTORY

Version	Date	Details
1.00	13 June 2005	New version following Voca launch and sorting code update.
1.10	16 August 2006	Release following addition of new sorting codes.
1.20	24 July 2007	Release following the launch of Vocalink. No other changes were made in this version.
1.30	19 November 2007	Release following addition of new sorting codes.
1.40	25 February 2008	Release following addition of new sorting codes.
1.50	30 April 2008	Release following addition of new sorting codes.
1.60	15 September 2008	Baselined version
1.70	18 September 2008	Minor clarification to section 6.2.
1.80	2 November 2009	Release following addition of a sorting code range.
1.90	18 October 2010	Added exception 14, new sorting codes and a new test case (for exception 14). Removed information on how to write modulus checking software.
2.00	17 January 2011	Amendments to sorting code ranges.
2.10	21 March 2011	Amendments to sorting code ranges.
2.20	17 October 2011	Addition of a new sorting code range. Clarification of 2 examples in test data; added new test case. Updated flow diagram to also cover exception 14.
2.30	28 November 2011	Removal of a sorting code from modulus checking.
2.40	23 April 2012	Removal of a sorting code from modulus checking.
2.50	22 October 2012	Addition and removal of sorting codes from the sorting code specification.
2.60	10 June 2013	Removal of sorting codes from modulus checking.
2.70	2 September 2013	Removal of sorting codes from modulus checking.
2.80	14 October 2013	Removal of sorting codes from modulus checking.
2.90	18 November 2013	Addition of sorting codes for modulus checking. Minor correction to test case 19.
3.00	24 February 2014	Removal of exceptions from two sorting code ranges. Correction to remove a sorting code range.
3.10	6 October 2014	Addition of sorting codes for modulus checking.

Version	Date	Details
3.20	23 March 2015	Addition of sorting code for modulus checking. Amendment of LTSB to Lloyds bank and TSB bank.
3.30	20 July 2015	• Section 6.1: Addition of sorting code 230580. • Section 5.2: Updated exceptions 12 and 13 - no longer Nationwide specific.
3.40	26 October 2015	Section 6.1: Addition of sorting code 233142
3.50	7th December 2015	Section 6.1: Addition of new sorting code range 170000 - 179499.
3.60	21 December 2015	Section 6.1: Addition of new sorting code range 608316 - 608316. **Note**: This version was not formally released.
3.70	8 January 2016	Section 4.1: Added financial institutions: - Charity Bank - Tesco Bank - Williams & Glyn **Note**: This version was formally released with an incorrect 'live from' date.
3.80	15 February 2016	• Baseline version containing updates made in versions 3.60 and 3.70 which were internal versions only. • The addition of the new sorting code range (608316 - 608316) and the additional financial institutions are active from this specification date.
3.90	13 June 2016	Section 6.1: Addition of new sorting codes: - 236538 - 237423 - 239360 - 238020 - 232704 - 236293 - 232283 - 233658 - 234321 - 235711 Section 6.1 - Removal of sorting codes 400194 - 400195.
4.00	11 November 2016	Section 4.1: - Removed reference to Williams & Glyn - Added Starling Bank (Active from 9 January 2017) Section 6.1: Addition of new sorting code 608371. Re-branded the document as per latest Vocalink template.

Version	Date	Details
4.10	18 January 2017	• Section 4.1: Addition of Contis Financial Services to the table of institutions. • Section 6.1: Addition of new sorting code 608370 The addition of Contis Financial Services and the new sorting code will be active from 6 March 2017.
4.20	11 April 2017	• Section 4.1: Addition of HSBC and ClearBank. • Section 6.1: Addition of new sorting code 200026. • Section 6.1: Addition of new sorting code 040406. These changes will be active from 12 June 2017.
4.30	25 April 2017	• Section 2: Flow diagram updated to include sorting code substitution and a new note added. • Section 4.1 - Institutions. This section has been deleted and replaced with the "Applicability of modulus checking" section. • Re-branded the document as per latest Vocalink template • Section 6.1 - Addition of new sorting code range 040010 - 040059. This change will be active from 3 July 2017. • Section 6.1 - Removed the following sorting codes from the range 400516 - 404799 DBIAI: 401055, 401199, 401266, 401276 - 401279, 401900, 401950 and 404375 - 404384. This change will be active from 3 July 2017 • Amended the weight for the following sorting codes from the range 400516 - 404799 Mod 11: 401055, 401199, 401266, 401276 - 401279, 401900, 401950 and 404375 - 404384. This change will be active from 3 July 2017
4.40	13 July 2017	• Section 6.1 - Added new sort codes 230088 and 040004. These changes will be active from 21 August 2017.
4.50	25 August 2017	• Section 6.1: Added sort code range 040072-040073 • Section 6.1: Changed sort code range 040406-040406 to 040400-041399, • Section 6.1:Amended sort code range 040010-040059 to 040020-040059, amended sort code range 040010-040059 to 040010-040014 for both Mod11 and DblAl, deleted 040015-040019 • Section 6.1:Added sort code range 236972-236972.
4.60	8 September 2017	• Section 6.1: Added sort codes - 231228, 231618 and 233135 for both Mod11 and DblAl. These changes will be active from 9 October 2017.
4.70	13 February 2018	• Section 6.1: Added sort code range 302880 - 302880 for Mod11. These changes will be active from 26 March 2018.
4.80	6 March 2018	• Section 6.1: Added sort code range 232290-232290 for Mod11 and sort code range 040082-040082 for Mod10. These changes will be active from 16 April 2018.

Version	Date	Details
4.90	27 April 2018	• Section 6.1: Amended the sort code range 040020-040059 to 040020-040023 for Mod11, 040024-040039 for Mod11 and DblAl, and 040040-040059 for Mod11. Added the range 041400-041449 for Mod11. These changes will be active from 2 July 2018.
5.00	25 June 2018	• Section 6.1: Removed the sort code range 170000-179499 and added the sort code range 040015-040015 for Mod11. These changes will be active from 6 August 2018.

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Please note that calls to the service desk may be recorded.

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CHAPTER 1: MODULUS CHECKING OVERVIEW

1 INTRODUCTION

1.1 ABOUT THIS SPECIFICATION

This document provides details of the modulus checking process used by some financial institutions and the technical specification for validating account numbers using these modulus checks.

NOTE: Every effort is made to ensure that the information contained in this document is correct at the time of publication. However, users of this document should understand that changes do occur from time to time which affect the ranges of sorting codes quoted, as well as the modulus checks and weighting factors. Vocalink Limited shall accept no liability for any loss or damage that may be suffered as a result of the incorrect processing of transactions resulting from the use of the information contained in this document.

1.2 WHAT IS MODULUS CHECKING?

Modulus checking is used to check the validity of account numbers for a sorting code.

Modulus checking can be applied to various activities, including allowing originators of transactions for the Bacs clearing service to write and use software that checks the possible validity of the account details quoted in their payment instructions before submission. Validating the sorting code and account details of these transactions has many benefits including helping to reduce the number of transactions that may be returned.

1.3 WHAT DOES THIS SPECIFICATION PROVIDE?

This specification provides details of the modulus checking methods for sorting codes of certain financial institutions. Methods differ slightly from institution to institution, but are fundamentally the same. This specification provides details of two general modulus checking methods used, and specific details used for each sorting code.

Checks in this specification can be used for sterling and euro transactions, unless stated otherwise.

1.4 UPDATE SERVICE

The latest version of the modulus checking specification and files are available for download on the Vocalink website. On this site, you can also register to receive automatic email notifications as soon as a new versions of the specification and files become available.

The data used for the validating accounts, that is specified in this document, is also available for download from the website as two text files for ease of uploading into your systems. You must ensure that when you download the latest specification you download all the new files:

- Validating account numbers: UK modulus checking

  An Adobe Acrobat file (*.pdf*)

- Modulus weight table data

  A text file (*VALACDOS.txt*)

- Sorting code substitution data

  A text file (*SCSUBTAB.txt*)

See also:

https://www.vocalink.com/customer-support/modulus-checking/

1.5 CHANGES TO THE SPECIFICATION

When a new version of this document is produced changes of the previous version are detailed in the change history table at the beginning of this document.

1.6 WHAT IS IN THIS DOCUMENT?

Chapter 1 (this chapter) explains the different modulus checks that are used by certain UK financial institutions.

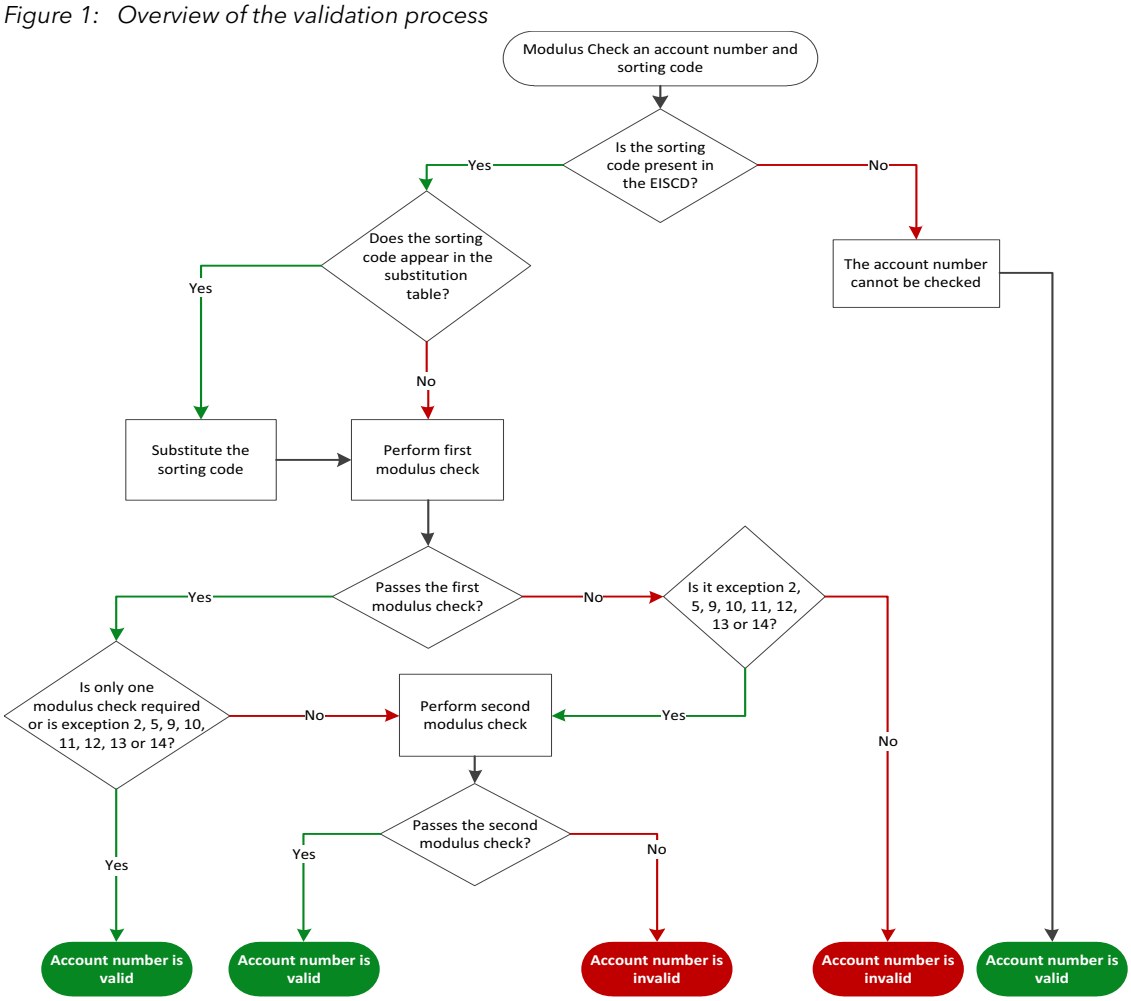
Chapter 2 details the specific checks and details of those checks for each sorting code that can be modulus checked. The chapter also details which institutions are covered by this specification, and how to check nonstandard account numbers.

Chapter 3 provides test cases that can be used to test modulus checking software.

2 VALIDATION PROCESS

The following diagram provides a general overview of how to determine if an account number is valid. There are exceptions to this method which are explained in the following chapters.

Figure 1: Overview of the validation process



NOTE: If the modulus check shows the account number as valid, this means that the account number is a possible account number for the sorting code, but does not necessarily mean that it is an account number being used at that sorting code. Any account details found as invalid should be checked with the account holder where possible.

3 MODULUS CHECK METHODS

There are two modulus check methods in use:

- Double alternate
- Standard (standard 10 and standard 11)

The modulus

Both of these modulus check methods use a modulus. In part of the processes for these methods, a weighted total is divided by a number – this number is the modulus. There are two modulus values in use, 10 and 11:

- Double alternate uses modulus 10
- Standard 10 uses a modulus of 10
- Standard 11 uses a modulus of 11

Notation

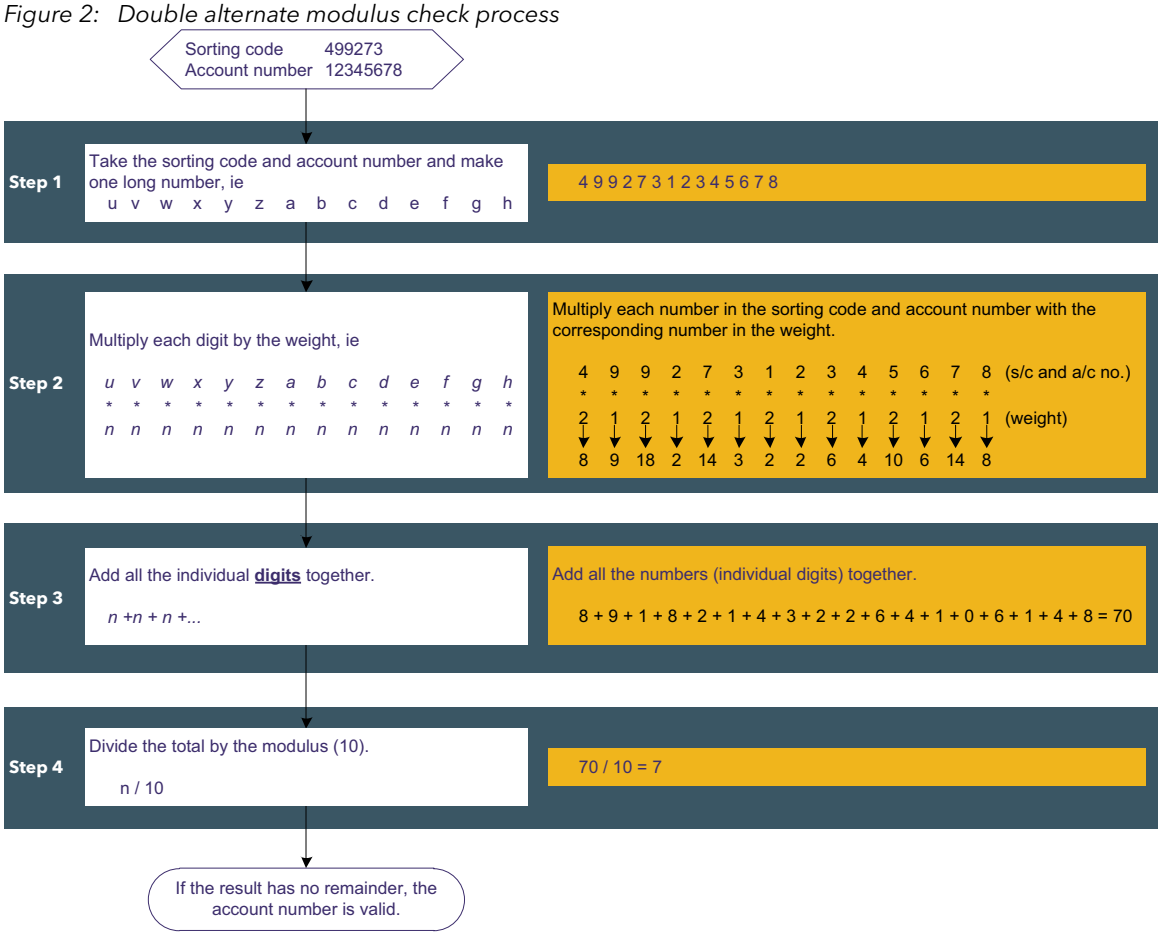
In this specification the following notation is used to define the specific digits within sorting codes and account numbers.

	Sorting code						Account number							
Digit number	1	2	3	4	5	6	1	2	3	4	5	6	7	8
Notation	u	v	w	x	y	z	a	b	c	d	e	f	g	h

3.1 DOUBLE ALTERNATE MODULUS CHECK

The following diagram describes the double alternate modulus check and provides an example of how it works. This modulus check usually uses all the digits of the sorting code and the account number, and is called "double alternate" as it effectively doubles the value of each alternate digit, starting with the penultimate right hand digit and working left. However, some specific sorting code ranges do not include all digits in the check, therefore the weight for their position is 0. Therefore, you should always use the weight given in the modulus weight table rather than "working out" the appropriate weight.

Figure 2: Double alternate modulus check process



NOTE: Some institutions/sorting codes have slight variations (exceptions) to this process.

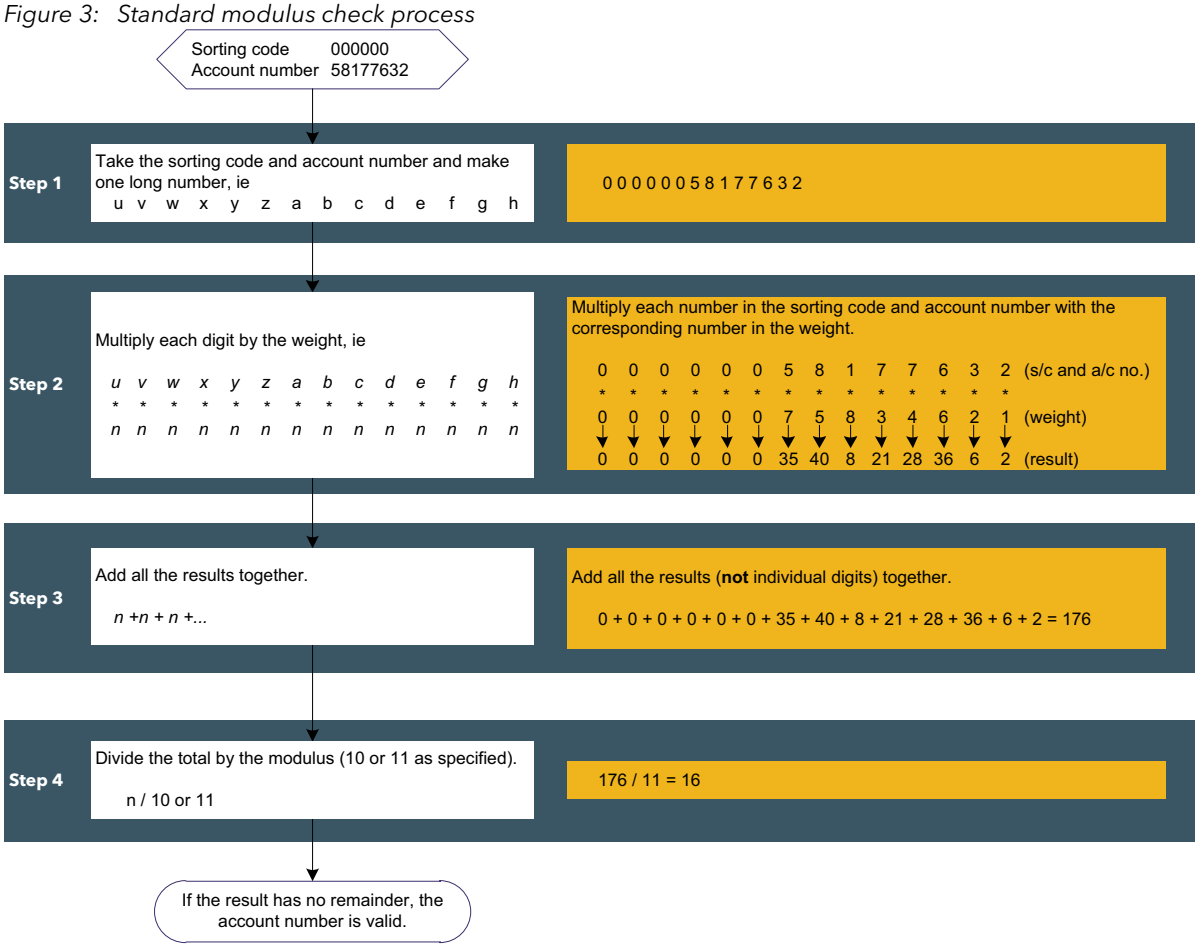
See also:

Exceptions

3.2 STANDARD (10 AND 11) MODULUS CHECK

The following diagram describes the standard modulus check and provides an example of how it works. This modulus check usually uses all the digits of the sorting code and the account number. If certain digits are not included in the check, the weight for their character position is 0. Standard 10 and standard 11 both use this method, but with a different modulus value.

Figure 3: Standard modulus check process



NOTE: Some institutions/sorting codes have slight variations (exceptions) to this process.

See also:

Exceptions

CHAPTER 2: SPECIFICATION BY SORTING CODE

4 OVERVIEW

This chapter details the specifics of the modulus checks for all sorting codes covered by this document.

NOTE: *Modulus check information may be in the specification for sorting codes that are not currently set up. All sorting codes must be checked against the current EISCD (Extended Industry Sorting Code Directory) or ISCD to ensure that sorting codes are valid.*

4.1 APPLICABILITY OF MODULUS CHECKING

Modulus checking is a recommended way of checking that a sorting codes and account numbers have been captured correctly. The "Modulus weight table" on page 21 specifies the sorting code ranges for which Modulus rules have been defined by participating institutions.

If a sort code appears in a range within the modulus weight table, the accounts at those sorting codes should conform to the defined rules for that range and can be validated accordingly.

NOTE: *Not all sorting codes in any given range may be in use, in which case, they are not present in the current EISCD (Extended Industry Sorting Code Directory) or the ISCD (Industry Sorting Code Directory). Therefore, users of Modulus Checking should first check if the sorting code is present in the EISCD, and if so, apply modulus checks to the account as specified in the* "Modulus weight table" on page 21.

4.2 NONSTANDARD ACCOUNT NUMBERS

The modulus check methods described in this specification are based on a standard account number of eight digits. Some banks and building societies have account numbers of different lengths.

The following table details how to convert nonstandard account numbers into eight digit account numbers, suitable for validating through modulus checking.

Bank/building society	To standardise the account number	Eg for...	...use
Ten digit account numbers			

Bank/building society	To standardise the account number	Eg for...	...use
National Westminster Bank plc	Use the last eight digits only. If there is a hyphen in the account number between the second and third numbers this should be ignored.	0123456789 or 01-23456789	23456789
Co-Operative Bank plc	Use the first eight digits only.	1234567890	12345678
Nine digit account numbers			
Santander (formerly Alliance & Leicester Commercial Bank plc)	Replace the last digit of the sorting code with the first digit of the account number, then use the last eight digits of the account number only.	nn-nn-nn 123456789	nn-nn-n1 23456789
Seven digit account numbers			
General	Prefix the account number with a zero (0).	1234567	01234567
Six digit account numbers			
General	Prefix the account number with two zeros (00) *NOTE: Customers of Clydesdale Bank plc can make payments at their branch using only the last six digits of their account number. However, for modulus checking purposes and for Bacs payment instructions all eight digits must be used.*	123456	00123456

For information on how to complete all payment instruction fields for Bacs clearing when accounts have nonstandard numbers, please refer to the following documents which are published by Bacs Payment Schemes Limited:

- Bacstel-IP – Service User Guide
- Crediting and Debiting Building Society Accounts – Service User's Guide

5 MODULUS CHECKING

5.1 CHECKING A SORTING CODE AND ACCOUNT NUMBER

The following procedure details how to validate a sorting code and account number. The procedure should be used in conjunction with the modulus weight table and the exception table.

Steps

1. Find the sorting code.

   In the modulus weight table, find the modulus weight that contains the sorting code you want to check an account number for. There may be one or two entries in the table for the sorting code, depending on whether one or two modulus checks must be carried out. If no range is found that contains the sorting code, there is no modulus check that can be performed. The sorting code and account number should be presumed valid unless other evidence implies otherwise.

2. Determine which modulus checking method(s) is required.

   Look in the Alg column for your sorting code to see which check(s) should be made:

   - Mod 10– Standard 10 modulus check
   - Mod 11– Standard 11 modulus check
   - DblAl– Double alternate modulus check.

3. Note the weight(s) to be used.

   The columns u to h show the weighting to be used for the modulus check.

4. Carry out the modulus check, including any exceptions.

   Perform the check(s) as specified for the required modulus check method. If there is more than one entry for a sorting code range, the first entry in the table for the sorting code should be carried out first. If in the final column (Ex) there is a number, the corresponding exception must be followed for the check(s).

See also:

"Exceptions" on page 16

"Modulus check methods" on page 11

"Modulus weight table" on page 21

5.2 EXCEPTIONS

Some sorting codes have slight variations to the modulus checking methods. These exceptions are shown in the modulus weight table by a number in the Ex column. The following explains what variations must be made to the modulus check method(s) for each exception type.

Exception 1

Perform the double alternate check except:

- Add **27** to the total (ie before you divide by 10)

This effectively places a financial institution number (580149) before the sorting code and account number which is subject to the alternate doubling as well.

Exception 2 and 9

Only occurs for some standard modulus 11 checks, when there is a **2** in the exception column for the first check for a sorting code and a **9** in the exception column for the second check for the same sorting code. This is used specifically for Lloyds euro accounts.

Perform the standard check, except:

- If **a <> 0** and **g <> 9**, substitute the weight specified in the modulus weight table with:

u	v	w	x	y	z	a	b	c	d	e	f	g	h
0	0	1	2	5	3	6	4	8	7	10	9	3	1

- If **a <> 0** and **g = 9**, substitute the weight specified in the modulus weight table with:

u	v	w	x	y	z	a	b	c	d	e	f	g	h
0	0	0	0	0	0	0	0	8	7	10	9	3	1

If the first row with exception 2 passes the standard modulus 11 check, you do not need to carry out the second check (ie it is deemed to be a valid sterling account).

All Lloyds euro accounts are held at sorting code 30-96-34, however customers may perceive that their euro account is held at the branch where sterling accounts are held and thus quote a sorting code other than 30-96-34. The combination of the "sterling" sorting code and "euro" account number will cause the first standard modulus 11 check to fail. In such cases, carry out the second modulus 11 check, substituting the sorting code with **309634** and the appropriate weighting. If this check passes it is deemed to be a valid euro account.

Exception 3

If **c=6** or **c=9** the double alternate check does not need to be carried out.

Exception 4

Perform the standard modulus 11 check.

After you have finished the check, ensure that the remainder is the same as the two-digit checkdigit; the checkdigit for exception 4 is **gh** from the original account number.

Exception 5

Perform the first check (standard modulus check) except:

- If the sorting code appears in this table in the "Original s/c" column, substitute it for the "substitute with" column (for check purposes only). If the sorting code is not found, use the original sorting code.

Original s/c	Substitute with	Original s/c	Substitute with
938173	938017	938620	938343

Original s/c	Substitute with	Original s/c	Substitute with
938289	938068	938622	938130
938297	938076	938628	938181
938600	938611	938643	938246
938602	938343	938647	938611
938604	938603	938648	938246
938608	938408	938649	938394
938609	938424	938651	938335
938613	938017	938653	938424
938616	938068	938654	938621
938618	938657		

NOTE: The sorting code substitution table information above is also available as a text file (SCSUBTAB.txt). Each original sorting code entry in the table above is represented as a line in the text file. The fields in the file are a fixed length and are separated by a "space". The fields in the text file read from left to right as follows:

- Original sorting code - 6 characters
- Substitute sorting code- 6 characters

For the standard check with exception 5 the checkdigit is **g** from the original account number.

- After dividing the result by 11:
  - if the **remainder = 0** and **g = 0** the account number is valid
  - if the **remainder = 1** the account number is invalid
  - for all other remainders, take the remainder away from 11. If the number you get is the same as **g** then the account number is valid.

Perform the second double alternate check, and for the double alternate check with exception 5 the checkdigit is **h** from the original account number, except:

- After dividing the result by 10:
  - if the **remainder = 0** and **h = 0** the account number is valid
  - for all other remainders, take the remainder away from 10. If the number you get is the same as **h** then the account number is valid.

Exception 6

Indicates that these sorting codes may contain foreign currency accounts which cannot be checked. Perform the first and second checks, except:

- If **a = 4**, **5**, **6**, **7** or **8**, and **g** and **h** are the same, the accounts are for a foreign currency and the checks cannot be used.

Exception 7

Perform the check as specified, except if **g = 9** zeroise weighting positions u-b.

Exception 8

Perform the check as specified, except substitute the sorting code with **090126**, for check purposes only.

Exception 10 and 11

These exceptions are for some Lloyds accounts and some TSB accounts. If there is a **10** in the exception column for the first check for a sorting code and an **11** in the exception column for the second check for the same sorting code, if either check is successful the account number is deemed valid.

For the exception 10 check, if **ab = 09** or **ab = 99** and **g = 9**, zeroise weighting positions **u-b**.

Exception 12 and 13

Where there is a **12** in the exception column for the first check for a sorting code and a **13** in the exception column for the second check for the same sorting code, if either check is successful the account number is deemed valid.

Exception 14

Perform the modulus 11 check as normal:

- If the check passes (that is, there is no remainder), then the account number should be considered valid. Do not perform the second check
- If the first check fails, then the second check must be performed as specified below.

Second check:

- If the 8th digit of the account number (reading from left to right) is not **0**, **1** or **9** then the account number fails the second check and is not a valid Coutts account number
- If the 8th digit is **0**, **1** or **9**, then remove the digit from the account number and insert a **0** as the 1st digit for check purposes only
- Perform the modulus 11 check on the modified account number using the same weightings as specified in the table (that is, **0 0 0 0 0 0 8 7 6 5 4 3 2 1**):
  - If there is no remainder, then the account number should be considered valid
  - If there is a remainder, then the account number fails the second check and is not a valid Coutts account number

Example 1

Sort code 180002 Account number 98093517

- Weightings are 0 0 0 0 0 0 8 7 6 5 4 3 2 1

- Calculation 0+0+0+0+0+0+72+56+0+45+12+15+2+7=209
- Division 209/11 = 19
- No remainder, therefore passed check 1 and the account number should be considered valid.

Example 2

Sort code 180002 Account number 00000190

Check 1:

- Weightings are 0 0 0 0 0 0 8 7 6 5 4 3 2 1
- Calculation 0+0+0+0+0+0+0+0+0+0+0+3+18+0=21
- Division 21/11 = 1 remainder 9
- Failed check 1 as there is a remainder. Perform check 2.

Check 2:

- Modify account number to be 00000019 and perform the modulus 11 check again.
- Weightings are 0 0 0 0 0 0 8 7 6 5 4 3 2 1
- Calculation 0+0+0+0+0+0+0+0+0+0+0+0+2+9=11
- Division 11/11 = 1
- No remainder, therefore passed check 2 and the account number should be considered valid.

6 SPECIFICATION FOR SORTING CODE RANGES

The table over the following pages shows the modulus check method, weight and any exceptions that should be used for checking account numbers for accounts held at the sorting codes specified. The data in the table is also provided as a separate text file (VALACDOS.txt) for your use.

The table is in sorting code order and a row in the table can represent a single sorting code or a range of sorting codes. Some sorting codes/ranges have more than one entry as they have two checks. The ranges are inclusive of the start and end sorting code values.

See also:
"Text file format" on page 61

6.1 MODULUS WEIGHT TABLE

These are the weightings to use for modulus checking. The table details the sorting code range, which modulus check to apply, the weightings for each position and the exception (if any).

In the Mod check column the following abbreviations are used:

- Mod10 indicates that the standard modulus check should be used with a modulus of 10.
- Mod11 indicates that the standard modulus check should be used with a modulus of 11.
- DblAl indicates that the double alternate modulus check should be used.

NOTE: In the valacdox.txt file, the modulus check methods are denoted by the same codes as above, except with all characters as capitals, ie MOD10, MOD11, DBLAL.

In the Ex column the number represents the exception that should be followed when carrying out the modulus check.

Sorting code range		Mod check	Weight to use for each digit position														
Start	End		u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
010004	016715	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
040004	040004	DblAl	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
040010	040014	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
040010	040014	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
040015	040015	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
040020	040023	Mod11	0	2	0	0	9	1	2	8	4	3	7	5	6	1	
040024	040039	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
040024	040039	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
040040	040059	Mod11	0	2	0	0	9	1	2	8	4	3	7	5	6	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
040072	040073	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
040082	040082	Mod10	2	1	2	1	2	1	0	64	32	16	8	4	2	1	
040400	041399	DblAl	1	3	4	3	9	3	1	7	5	5	4	5	2	4	
041400	041449	Mod11	0	2	0	0	9	1	2	8	4	3	7	5	6	1	
050000	050020	Mod11	0	0	0	0	0	0	2	1	7	5	8	2	4	1	
050022	058999	Mod11	0	0	0	0	0	0	2	1	7	5	8	2	4	1	
070116	070116	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	12
070116	070116	Mod10	0	3	2	4	5	8	9	4	5	6	7	8	9	-1	13
070246	070246	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
070436	070436	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
070806	070806	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
070976	070976	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
071096	071096	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
071226	071226	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
071306	071306	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
071986	071986	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	
074456	074456	Mod11	0	0	7	6	5	8	9	4	5	6	7	8	9	-1	12
074456	074456	Mod10	0	3	2	4	5	8	9	4	5	6	7	8	9	-1	13
080211	080211	Mod10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
080228	080228	Mod10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
086001	086001	Mod10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
086020	086020	Mod10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
086086	086086	Mod11	0	0	0	0	0	8	9	4	5	6	7	8	9	-1	
086090	086090	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	8
089000	089999	Mod10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
090013	090013	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090105	090105	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
090118	090118	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
090126	090129	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090131	090136	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
090150	090156	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
090180	090185	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090190	090196	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090204	090204	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090222	090222	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090356	090356	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
090500	090599	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090704	090704	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090705	090705	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090710	090710	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090715	090715	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090720	090726	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
090736	090739	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
090790	090790	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
091600	091600	Mod10	0	0	0	0	0	1	7	1	3	7	1	3	7	1	
091601	091601	Mod10	0	0	3	7	1	3	7	1	3	7	1	3	7	1	
091740	091743	Mod10	0	0	0	0	0	1	7	1	3	7	1	3	7	1	
091800	091809	Mod10	0	0	0	0	0	1	7	1	3	7	1	3	7	1	
091811	091865	Mod10	0	0	0	0	0	1	7	1	3	7	1	3	7	1	
100000	101099	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
101101	101498	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
101500	101999	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
102400	107999	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
108000	108079	Mod11	0	0	0	0	0	3	2	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
108080	108099	Mod11	0	0	0	0	4	3	2	7	6	5	4	3	2	1	
108100	109999	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
110000	119280	DblAl	0	0	2	1	2	1	2	1	2	1	2	1	2	1	1
119282	119283	DblAl	0	0	2	1	2	1	2	1	2	1	2	1	2	1	1
119285	119999	DblAl	0	0	2	1	2	1	2	1	2	1	2	1	2	1	1
120000	120961	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
120963	122009	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
122011	122101	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
122103	122129	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
122131	122135	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
122213	122299	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
122400	122999	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
124000	124999	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
133000	133999	Mod11	0	0	0	0	0	10	7	8	4	6	3	5	2	1	
134012	134020	Mod11	0	0	0	7	5	9	8	4	6	3	5	2	0	0	4
134121	134121	Mod11	0	0	0	1	0	0	8	4	6	3	5	2	0	0	4
150000	158000	Mod11	4	3	0	0	0	0	2	7	6	5	4	3	2	1	
159800	159800	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
159900	159900	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
159910	159910	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
160000	161027	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161029	161029	Mod11	0	0	0	0	0	0	2	7	6	5	4	3	2	1	
161030	161041	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161050	161050	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161055	161055	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161060	161060	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161065	161065	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
161070	161070	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161075	161075	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161080	161080	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161085	161085	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161090	161090	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
161100	162028	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
162030	164300	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
165901	166001	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
166050	167600	Mod11	0	0	6	5	4	3	2	7	6	5	4	3	2	1	
168600	168600	Mod11	0	0	0	0	0	0	2	7	6	5	4	3	2	1	
180002	180002	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180005	180005	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180009	180009	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180036	180036	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180038	180038	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180091	180092	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180104	180104	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180109	180110	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
180156	180156	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
185001	185001	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	14
185003	185025	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
185027	185099	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
200000	200002	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200000	200002	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200004	200004	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200004	200004	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200026	200026	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
200026	200026	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200051	200077	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200051	200077	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200079	200097	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200079	200097	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200099	200156	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200099	200156	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200158	200387	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200158	200387	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200403	200405	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200403	200405	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200407	200407	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200407	200407	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200411	200412	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200411	200412	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200414	200423	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200414	200423	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200425	200899	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200425	200899	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
200901	201159	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
200901	201159	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
201161	201177	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
201161	201177	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
201179	201351	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
201179	201351	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
201353	202698	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
201353	202698	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
202700	203239	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
202700	203239	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
203241	203255	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
203241	203255	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
203259	203519	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
203259	203519	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
203521	204476	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
203521	204476	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
204478	205475	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
204478	205475	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
205477	205954	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
205477	205954	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
205956	206124	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
205956	206124	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
206126	206157	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
206126	206157	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
206159	206390	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
206159	206390	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
206392	206799	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
206392	206799	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
206802	206874	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
206802	206874	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
206876	207170	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
206876	207170	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
207173	208092	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
207173	208092	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
208094	208721	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
208094	208721	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
208723	209034	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
208723	209034	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
209036	209128	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
209036	209128	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
209130	209999	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	6
209130	209999	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	6
230088	230088	Mod10	2	1	2	1	2	1	2	7	4	5	6	3	8	1	
230338	230338	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
230338	230338	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
230580	230580	Mod 11	0	0	0	0	0	0	2	7	6	5	4	3	2	1	12
230580	230580	Mod 11	0	0	0	0	0	0	5	7	6	5	4	3	2	1	13
230614	230614	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
230614	230614	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
230709	230709	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
230709	230709	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
230872	230872	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
230872	230872	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
230933	230933	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
230933	230933	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231018	231018	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231018	231018	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231213	231213	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231213	231213	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231228	231228	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231228	231228	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231354	231354	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
231354	231354	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231469	231469	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231469	231469	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231558	231558	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231558	231558	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231618	231618	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231618	231618	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231679	231679	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231679	231679	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231843	231843	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231843	231843	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
231985	231985	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
231985	231985	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232130	232130	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232130	232130	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232279	232279	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232279	232279	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232283	232283	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232283	232283	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232290	232290	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232445	232445	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232445	232445	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232571	232571	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232571	232571	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232636	232636	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232636	232636	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232704	232704	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
232704	232704	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232725	232725	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232725	232725	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232813	232813	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232813	232813	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
232939	232939	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
232939	232939	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233080	233080	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233080	233080	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233135	233135	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233135	233135	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233142	233142	Mod10	2	1	2	1	2	1	30	36	24	20	16	12	8	4	
233171	233171	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233171	233171	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233188	233188	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233188	233188	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233231	233231	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233231	233231	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233344	233344	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233344	233344	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233438	233438	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233438	233438	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233456	233456	Mod10	2	1	2	1	2	1	0	64	32	16	8	4	2	1	
233483	233483	Mod11	0	0	0	0	0	0	2	7	6	5	4	3	2	1	
233556	233556	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233556	233556	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233658	233658	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
233658	233658	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233693	233693	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233693	233693	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
233752	233752	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
233752	233752	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234081	234081	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234081	234081	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234193	234193	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234193	234193	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234252	234252	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234252	234252	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234321	234321	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234321	234321	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234377	234377	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234377	234377	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234570	234570	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234570	234570	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234666	234666	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234666	234666	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234779	234779	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234779	234779	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234828	234828	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234828	234828	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
234985	234985	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
234985	234985	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235054	235054	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235054	235054	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
235164	235164	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235164	235164	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235262	235262	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235262	235262	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235323	235323	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235323	235323	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235451	235451	Mod11	0	0	0	0	0	0	2	7	6	5	4	3	2	1	
235459	235459	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235459	235459	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235519	235519	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235519	235519	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235676	235676	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235676	235676	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235711	235711	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235711	235711	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235756	235756	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235756	235756	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
235945	235945	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
235945	235945	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236006	236006	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236006	236006	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236119	236119	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236119	236119	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236233	236233	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236233	236233	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236247	236247	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
236293	236293	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
236293	236293	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236422	236422	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236422	236422	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236527	236527	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236527	236527	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236538	236538	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236538	236538	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236643	236643	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236643	236643	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236761	236761	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236761	236761	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236907	236907	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
236907	236907	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
236972	236972	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237130	237130	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237130	237130	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237265	237265	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237265	237265	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237355	237355	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237355	237355	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237423	237423	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237423	237423	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237427	237427	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237427	237427	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237563	237563	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237563	237563	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237622	237622	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
237622	237622	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237728	237728	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237728	237728	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
237873	237873	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
237873	237873	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238020	238020	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238020	238020	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238043	238043	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238043	238043	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238051	238051	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238051	238051	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238175	238175	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238175	238175	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238257	238257	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238257	238257	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238392	238431	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
238392	238431	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238432	238432	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238432	238432	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238433	238583	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
238433	238583	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238585	238590	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
238585	238590	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238599	238599	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238599	238599	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238613	238613	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238613	238613	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
238672	238672	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238672	238672	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238717	238717	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238717	238717	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
238890	238899	Mod11	0	0	0	0	4	3	2	7	6	5	4	3	2	1	
238908	238908	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
238908	238908	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239071	239071	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239071	239071	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239126	239126	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239126	239126	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239136	239140	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
239136	239140	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239143	239144	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
239143	239144	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239282	239283	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
239282	239283	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239285	239294	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
239285	239294	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239295	239295	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239295	239295	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239296	239318	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
239296	239318	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239360	239360	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239360	239360	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239380	239380	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239380	239380	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
239435	239435	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239435	239435	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239525	239525	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239525	239525	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239642	239642	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239642	239642	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
239751	239751	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
239751	239751	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
300000	300006	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
300000	300006	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
300008	300009	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
300008	300009	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
300050	300051	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
300134	300138	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
300134	300138	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
300161	300161	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	
300176	300176	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	
301001	301001	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301001	301001	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301004	301004	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301004	301004	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301007	301007	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301007	301007	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301012	301012	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301012	301012	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301022	301022	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301027	301027	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301047	301047	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301047	301047	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301049	301049	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301049	301049	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301052	301052	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301052	301052	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301075	301076	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301075	301076	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301108	301108	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301108	301108	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301112	301112	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301112	301112	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301127	301127	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301127	301127	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301137	301137	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301142	301142	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301148	301148	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301148	301148	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301154	301155	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301161	301161	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301161	301161	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301166	301166	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301170	301170	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301174	301175	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301174	301175	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301191	301191	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301191	301191	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301194	301195	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301194	301195	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301204	301205	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301204	301205	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301209	301210	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301209	301210	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301215	301215	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301215	301215	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301218	301218	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301218	301218	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301220	301221	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301220	301221	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301234	301234	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301234	301234	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301251	301251	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301251	301251	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301259	301259	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301259	301259	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301274	301274	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301274	301274	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301280	301280	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301280	301280	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301286	301286	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301286	301286	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301295	301296	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301295	301296	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301299	301299	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301299	301299	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301301	301301	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301301	301301	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301305	301305	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301305	301305	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301318	301318	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301318	301318	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301330	301330	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301330	301330	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301332	301332	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301332	301332	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301335	301335	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301335	301335	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301342	301342	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301342	301342	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301350	301355	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301350	301355	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301364	301364	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301364	301364	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301368	301368	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301368	301368	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301376	301376	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301376	301376	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301380	301380	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301380	301380	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301388	301388	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301388	301388	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301390	301390	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301390	301390	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301395	301395	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301395	301395	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301400	301400	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301400	301400	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301424	301424	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301424	301424	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301432	301432	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301432	301432	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301433	301433	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301435	301435	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301437	301437	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301437	301437	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301439	301439	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301440	301440	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301440	301440	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301443	301443	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301444	301444	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301444	301444	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301447	301447	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301447	301447	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301451	301451	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301451	301451	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301456	301456	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301456	301456	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301458	301458	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301460	301460	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301460	301460	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301463	301463	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301464	301464	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301464	301464	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301466	301466	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301469	301469	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301469	301469	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301471	301471	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301471	301471	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301474	301474	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301477	301477	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301477	301477	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301482	301482	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301483	301483	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301483	301483	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301485	301485	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301487	301487	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301504	301504	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301504	301504	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301510	301510	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301514	301514	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301517	301517	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301525	301525	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301539	301539	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301539	301539	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301542	301542	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301542	301542	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301552	301553	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301552	301553	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301557	301557	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301557	301557	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301573	301573	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301593	301593	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301593	301593	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301595	301595	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301595	301595	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301597	301597	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301597	301597	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301599	301599	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301599	301599	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301607	301607	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301609	301609	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301609	301609	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301611	301611	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301611	301611	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301620	301620	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301620	301620	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301628	301628	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301628	301628	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301634	301634	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301634	301634	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301641	301642	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301641	301642	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301653	301653	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301653	301653	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301657	301657	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301662	301662	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301662	301662	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301664	301664	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301664	301664	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301670	301670	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301670	301670	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301674	301674	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301674	301674	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301684	301684	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301684	301684	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301695	301696	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301695	301696	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301700	301702	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301700	301702	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301705	301705	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
301712	301712	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301712	301712	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301716	301716	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301716	301716	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301748	301748	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301748	301748	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301773	301773	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301773	301773	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301777	301777	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301777	301777	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301780	301780	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301780	301780	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301785	301785	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301785	301785	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301803	301803	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301803	301803	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301805	301805	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301805	301805	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301806	301806	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301806	301806	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301816	301816	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301816	301816	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301825	301825	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301825	301825	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301830	301830	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301830	301830	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301834	301834	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301834	301834	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301843	301843	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301843	301843	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301845	301845	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301845	301845	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301855	301856	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301855	301856	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301864	301864	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301864	301864	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
301868	301869	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301868	301869	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301883	301883	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301883	301883	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301886	301888	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301886	301888	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301898	301898	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301898	301898	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
301914	301996	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
301914	301996	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
302500	302500	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
302500	302500	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
302556	302556	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
302556	302556	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
302579	302580	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
302579	302580	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
302880	302880	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
303460	303461	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
303460	303461	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305907	305939	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305907	305939	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305941	305960	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305941	305960	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305971	305971	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305971	305971	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305974	305974	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305974	305974	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
305978	305978	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305978	305978	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305982	305982	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305982	305982	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305984	305988	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305984	305988	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
305990	305993	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
305990	305993	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306017	306018	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306017	306018	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306020	306020	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306020	306020	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306028	306028	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306028	306028	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306038	306038	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306038	306038	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306150	306151	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306150	306151	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306154	306155	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306154	306155	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306228	306228	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306228	306228	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306229	306229	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306229	306229	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306232	306232	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306232	306232	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306242	306242	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
306242	306242	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306245	306245	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306245	306245	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306249	306249	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306249	306249	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306255	306255	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306255	306255	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306259	306263	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306259	306263	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306272	306279	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306272	306279	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306281	306281	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306281	306281	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306289	306289	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306289	306289	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306296	306296	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306296	306296	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306299	306299	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306299	306299	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306300	306300	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306300	306300	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306347	306347	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306347	306347	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306354	306355	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306354	306355	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306357	306357	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306357	306357	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
306359	306359	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306359	306359	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306364	306364	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306364	306364	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306394	306394	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306394	306394	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306397	306397	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306397	306397	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306410	306410	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306410	306410	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306412	306412	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306412	306412	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306414	306415	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306414	306415	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306418	306419	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306418	306419	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306422	306422	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306422	306422	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306434	306434	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306434	306434	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306437	306438	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306437	306438	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306442	306444	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306442	306444	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306457	306457	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306457	306457	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306472	306472	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
306472	306472	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306479	306479	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306479	306479	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306497	306497	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306497	306497	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306521	306522	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306521	306522	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306537	306539	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306537	306539	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306541	306541	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306541	306541	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306549	306549	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306549	306549	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306562	306565	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306562	306565	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306572	306572	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306572	306572	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306585	306586	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306585	306586	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306592	306593	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306592	306593	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306675	306677	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306675	306677	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306689	306689	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306689	306689	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306695	306696	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306695	306696	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
306733	306735	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306733	306735	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306747	306749	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306747	306749	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306753	306753	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306753	306753	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306756	306756	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306756	306756	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306759	306759	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306759	306759	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306762	306762	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306762	306762	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306764	306764	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306764	306764	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306766	306767	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306766	306767	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306769	306769	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306769	306769	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306772	306772	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306772	306772	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306775	306776	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306775	306776	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306779	306779	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306779	306779	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306782	306782	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306782	306782	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306788	306789	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
306788	306789	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
306799	306799	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
306799	306799	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307184	307184	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307184	307184	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307188	307190	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307188	307190	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307198	307198	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307198	307198	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307271	307271	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307271	307271	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307274	307274	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307274	307274	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307654	307654	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307654	307654	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307779	307779	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307779	307779	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307788	307789	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307788	307789	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
307809	307809	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
307809	307809	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308012	308012	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308012	308012	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308016	308016	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308016	308016	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308026	308027	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308026	308027	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
308033	308034	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308033	308034	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308037	308037	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308037	308037	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308042	308042	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308042	308042	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308045	308045	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308045	308045	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308048	308049	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308048	308049	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308054	308055	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308054	308055	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308063	308063	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308063	308063	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308076	308077	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308076	308077	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308082	308083	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308082	308083	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308085	308085	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308085	308085	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308087	308089	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308087	308089	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308095	308097	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308095	308097	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308404	308404	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308404	308404	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308412	308412	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
308412	308412	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308420	308427	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308420	308427	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308433	308434	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308433	308434	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308441	308446	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308441	308446	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308448	308448	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308448	308448	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308451	308454	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308451	308454	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308457	308459	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308457	308459	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308462	308463	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308462	308463	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308467	308469	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308467	308469	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308472	308473	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308472	308473	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308475	308477	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308475	308477	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308479	308479	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308479	308479	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308482	308482	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308482	308482	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308484	308487	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308484	308487	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
308784	308784	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308784	308784	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308804	308804	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308804	308804	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308822	308822	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308822	308822	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
308952	308952	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
308952	308952	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
309001	309633	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
309001	309633	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
309634	309634	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	
309635	309746	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
309635	309746	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
309748	309871	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
309748	309871	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
309873	309915	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
309873	309915	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
309917	309999	Mod11	0	0	3	2	9	8	5	7	6	5	4	3	2	1	2
309917	309999	Mod11	0	0	3	2	9	8	1	7	6	5	4	3	2	1	9
400000	400193	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
400000	400193	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
400196	400514	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
400196	400514	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
400515	400515	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
400516	401054	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
400516	401054	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
401055	401055	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	

Sorting code range		Mod check	Weight to use for each digit position														
Start	End		u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
401056	401198	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
401056	401198	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
401199	401199	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
401200	401265	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
401200	401265	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
401266	401266	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
401267	401275	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
401267	401275	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
401276	401279	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
401280	401899	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
401280	401899	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
401900	401900	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
401901	401949	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
401901	401949	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
401950	401950	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
401951	404374	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
401951	404374	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
404375	404384	Mod11	0	0	0	0	0	0	8	5	7	3	4	9	2	1	
404385	404799	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
404385	404799	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
406420	406420	Mod10	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
500000	501029	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
502101	560070	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600000	600108	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600110	600124	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600127	600142	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600144	600149	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
600180	600304	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600307	600312	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600314	600355	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600357	600851	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
600901	601360	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
601403	608028	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
608301	608301	Mod 10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
608316	608316	Mod 10	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
608370	608370	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
608371	608371	Mod 11	0	0	0	0	0	0	2	8	4	3	7	5	6	1	
609593	609593	Mod10	0	0	0	0	0	0	7	1	3	7	1	3	7	1	
609599	609599	Mod10	0	0	0	0	0	0	0	5	7	5	2	1	2	1	
640001	640001	Mod11	0	0	0	0	0	0	8	7	6	5	4	3	2	1	
720000	720249	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
720251	724443	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
725000	725251	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
725253	725616	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
726000	726616	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
770100	771799	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
771877	771877	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
771900	772799	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
772813	772817	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
772901	773999	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
774100	774599	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
774700	774830	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
774832	777789	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
777791	777999	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
778001	778001	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
778300	778799	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
778855	778855	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
778900	779174	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
779414	779999	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	7
800000	802005	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802007	802042	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802044	802065	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802067	802109	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802111	802114	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802116	802123	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802151	802154	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802156	802179	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
802181	803599	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
803609	819999	Mod11	0	0	1	8	2	6	3	7	9	5	8	4	2	1	
820000	826917	Mod11	0	0	0	0	0	0	0	0	7	3	4	9	2	1	
820000	826917	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	3
826919	827999	Mod11	0	0	0	0	0	0	0	0	7	3	4	9	2	1	
826919	827999	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	3
829000	829999	Mod11	0	0	0	0	0	0	0	0	7	3	4	9	2	1	
829000	829999	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	3
830000	835700	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836500	836501	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836505	836506	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836510	836510	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836515	836515	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836530	836530	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
836535	836535	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836540	836540	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836560	836560	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836565	836565	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836570	836570	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836585	836585	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836590	836590	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836595	836595	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836620	836620	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836625	836625	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
836630	836630	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
837550	837550	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
837560	837560	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
837570	837570	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
837580	837580	Mod11	0	0	4	3	2	7	2	7	6	5	4	3	2	1	
839105	839106	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
839105	839106	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
839130	839131	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	1	0	
839130	839131	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
839147	839147	Mod10	0	0	0	0	0	0	0	5	7	5	2	1	2	1	
870000	872791	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
870000	872791	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
872793	876899	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
872793	876899	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876919	876919	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876919	876919	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876921	876923	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
876921	876923	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876925	876932	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876925	876932	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876935	876935	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876935	876935	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876951	876951	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876951	876951	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876953	876955	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876953	876955	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876957	876957	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876957	876957	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
876961	876965	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
876961	876965	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877000	877070	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877000	877070	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877071	877071	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877071	877071	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877078	877078	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877078	877078	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877088	877088	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877088	877088	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877090	877090	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877090	877090	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877098	877098	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877098	877098	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11
877099	879999	Mod11	0	0	1	2	5	3	6	4	8	7	10	9	3	1	10
877099	879999	Mod11	0	0	5	10	9	8	0	7	6	5	4	3	2	1	11

Sorting code range			Weight to use for each digit position														
Start	End	Mod check	u	v	w	x	y	z	a	b	c	d	e	f	g	h	Ex
890000	890699	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
891000	891616	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
892000	892616	Mod11	0	0	0	0	0	9	8	7	6	5	4	3	2	1	
900000	902396	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
900000	902396	Mod11	32	16	8	4	2	1	0	0	0	0	0	0	0	0	
902398	909999	Mod11	0	0	0	0	0	0	128	64	32	16	8	4	2	1	
902398	909999	Mod11	32	16	8	4	2	1	0	0	0	0	0	0	0	0	
938000	938696	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	0	0	5
938000	938696	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	0	5
938698	938999	Mod11	7	6	5	4	3	2	7	6	5	4	3	2	0	0	5
938698	938999	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	0	5
950000	950002	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
950000	950002	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
950004	950479	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
950004	950479	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
950500	959999	Mod11	0	0	0	0	0	0	0	7	6	5	4	3	2	1	
950500	959999	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
980000	980004	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
980000	980004	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
980006	983000	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
980006	983000	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
983003	987000	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
983003	987000	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	
987004	989999	Mod11	0	0	0	0	0	0	7	6	5	4	3	2	1	0	
987004	989999	DblAl	2	1	2	1	2	1	2	1	2	1	2	1	2	1	

6.2 TEXT FILE FORMAT

The modulus weight table is also available as a text file (VALACDOS.txt). Each line of the table in section 6.1is represented as a line in the text file. The fields in the file are a fixed length and are separated by a space. There will not be trailing spaces at the end of lines. The fields in the text file read from left to right as follows:

- Start sorting code – 6 characters
- End sorting code – 6 characters
- Algorithm used– 5 characters (MOD10, MOD11, or DBLAL)
- Weightings (u-z a-h)– 4 characters for each weighting position, ie a three digit signed integer
- Exception code – 3 characters, where present.

NOTE: *Records are not fixed length and the exception code can be blank.*

VOCALINK

mastercard

CHAPTER 3: TEST CASES

7 TEST DATA AND EXPECTED RESULTS

The following table provides a list of tests you can carry out to check that the program you have written is functioning correctly. It covers all the combinations of modulus checks and exceptions.

The account numbers used in the following table are examples only, and these sorting codes may not currently be in use.

No	Description of test case	Sorting code	Account number	Valid flag
1	Pass modulus 10 check.	089999	66374958	Y
2	Pass modulus 11 check.	107999	88837491	Y
3	Pass modulus 11 and double alternate checks.	202959	63748472	Y
4	Exception 10 & 11 where first check passes and second check fails.	871427	46238510	Y
5	Exception 10 & 11 where first check fails and second check passes.	872427	46238510	Y
6	Exception 10 where in the account number ab=09 and the g=9. The first check passes and second check fails.	871427	09123496	Y
7	Exception 10 where in the account number ab=99 and the g=9. The first check passes and the second check fails.	871427	99123496	Y
8	Exception 3, and the sorting code is the start of a range. As c=6 the second check should be ignored.	820000	73688637	Y
9	Exception 3, and the sorting code is the end of a range. As c=9 the second check should be ignored.	827999	73988638	Y
10	Exception 3. As c<>6 or 9 perform both checks pass.	827101	28748352	Y
11	Exception 4 where the remainder is equal to the checkdigit.	134020	63849203	Y
12	Exception 1 – ensures that 27 has been added to the accumulated total and passes double alternate modulus check.	118765	64371389	Y

No	Description of test case	Sorting code	Account number	Valid flag
13	Exception 6 where the account fails standard check but is a foreign currency account.	200915	41011166	Y
14	Exception 5 where the check passes.	938611	07806039	Y
15	Exception 5 where the check passes with substitution.	938600	42368003	Y
16	Exception 5 where both checks produce a remainder of 0 and pass.	938063	55065200	Y
17	Exception 7 where passes but would fail the standard check.	772798	99345694	Y
18	Exception 8 where the check passes.	086090	06774744	Y
19	Exception 2 & 9 where the first check passes.	309070	02355688	Y
20	Exception 2 & 9 where the first check fails and second check passes with substitution.	309070	12345668	Y
21	Exception 2 & 9 where a≠0 and g≠9 and passes.	309070	12345677	Y
22	Exception 2 & 9 where a≠0 and g=9 and passes.	309070	99345694	Y
23	Exception 5 where the first checkdigit is correct and the second incorrect.	938063	15764273	N
24	Exception 5 where the first checkdigit is incorrect and the second correct.	938063	15764264	N
25	Exception 5 where the first checkdigit is incorrect with a remainder of 1.	938063	15763217	N
26	Exception 1 where it fails double alternate check.	118765	64371388	N
27	Pass modulus 11 check and fail double alternate check.	203099	66831036	N
28	Fail modulus 11 check and pass double alternate check.	203099	58716970	N
29	Fail modulus 10 check.	089999	66374959	N
30	Fail modulus 11 check.	107999	88837493	N
31	Exception 12/13 where passes modulus 11 check (in this example, modulus 10 check fails, however, there is no need for it to be performed as the first check passed).	074456	12345112	Y
32	Exception 12/13 where passes the modulus 11check (in this example, modulus 10 check passes as well, however, there is no need for it to be performed as the first check passed).	070116	34012583	Y
33	Exception 12/13 where fails the modulus 11 check, but passes the modulus 10 check.	074456	11104102	Y
34	Exception 14 where the first check fails and the second check passes.	180002	00000190	Y