Create Coefficients For Messages

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In [1]:
```
printf(strftime ("Last updated: %A %e %B %Y", localtime (time ())))
```

```
Last updated: Tuesday 26 November 2019
```

Input the table

In [2]:
```
MorseTable
```

In [3]:
```
Test = "QRG DE VA3ASE?"
```

```
Test = QRG DE VA3ASE?
```

In [4]:
```
Trinary_for_test = dec2base(arrayfun(@(v) strfind(Morse_char_to_trinary_map
```

```
Trinary_for_test =

1000000000000221200
1000000000000012100
1000000000000022100
1000000000000000000
1000000000000021100
1000000000000000100
1000000000000000000
1000000000000111200
1000000000000001200
1000000000001112200
1000000000000001200
1000000000000011100
1000000000000000100
1000000000011221100
```

In [5]:
```
Test_marks = ...
    # Do the processing for each character
    arrayfun(@(v) ...
        # Replace trailing zeroes with nothing
#        strrep(
                # Replace '2' with 'aaa0'
                strrep(
                        # Replace '1' with a 'a0'
                        strrep(
                                # Replace leading 1 and zeroes with nothing
                                regexprep(v, "^10{9,16}([12])|^10{17}(00)$",
                                "1", "a0"),
                        "2", "aaa0"),
#                "0", ""),
        cellstr(Trinary_for_test)
    )
```

```
Test_marks =
{
  [1,1] = aaa0aaa0a0aaa000
  [2,1] = a0aaa0a000
  [3,1] = aaa0aaa0a000
  [4,1] = 00
  [5,1] = aaa0a0a000
  [6,1] = a000
  [7,1] = 00
  [8,1] = a0a0a0aaa000
  [9,1] = a0aaa000
  [10,1] = a0a0a0aaa0aaa000
  [11,1] = a0aaa000
  [12,1] = a0a0a000
  [13,1] = a000
  [14,1] = a0a0aaa0aaa0a0a000
}
```

In [6]:
```
Test_marks_str = char(Test_marks(:,1))
```

```
Test_marks_str =

aaa0aaa0a0aaa000
a0aaa0a000
aaa0aaa0a000
00
aaa0a0a000
a000
00
a0a0a0aaa000
a0aaa000
a0a0a0aaa0aaa000
a0aaa000
a0a0a000
a000
a0a0aaa0aaa0a0a000
```

In [7]:
```
size(Test_marks_str)
```

```
ans =

   14   18
```

In [8]:
```
Test_marks_concat = strrep(reshape(Test_marks_str', 1, []), " ", "")
```

```
Test_marks_concat = aaa0aaa0a0aaa000a0aaa0a000aaa0aaa0a00000aaa0a0a000a00
000a0a0a0aaa000a0aaa000a0a0a0aaa0aaa000a0aaa000a0a0a000a000a0a0aaa0aaa0a0
a000
```

In [9]:
```
Test_coeff = isalpha(Test_marks_concat)
```

```
Test_coeff =

 Columns 1 through 26:

  1  1  1  0  1  1  1  0  1  0  1  1  1  0  0  0  1  0  1  1  1  0  1  0
0  0

 Columns 27 through 52:

  1  1  1  0  1  1  1  0  1  0  0  0  0  0  1  1  1  0  1  0  1  0  0  0
1  0

 Columns 53 through 78:

  0  0  0  0  1  0  1  0  1  0  1  1  1  0  0  0  1  0  1  1  1  0  0  0
1  0

 Columns 79 through 104:

  1  0  1  0  1  1  1  0  1  1  1  0  0  0  1  0  1  1  1  0  0  0  1  0
1  0

 Columns 105 through 130:

  1  0  0  0  1  0  0  0  1  0  1  0  1  1  1  0  1  1  1  0  1  0  1  0
0  0
```

In [ ]: