**6** Students are learning about a simple check digit method for data validation. In this method, a single check digit is appended to the end of an original number to give a new number.

The students are studying a method which:

- calculates the sum of all the digits in the original number
- uses integer division to calculate the remainder when the sum is divided by 10
- uses the remainder as the check digit
- appends the check digit to the original number, creating the new number.

For example:

| | |
|---|---|
| original number | 4162 |
| sum of all digits | 4 + 1 + 6 + 2 = 13 |
| remainder when the sum is divided by 10 using integer division | 3 |
| new number | 41623 |

The original number is always at least three digits in length.

When the new number is input, the check digit is used to validate the new number.

**(a)** A function `Generate()` is written to take an original number as a parameter and to return the check digit.

Outline a test plan that could be used to fully test function `Generate()`

Assume that the parameter is valid.

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**(b)** A function `CheckNumber()` will take an integer value and return the Boolean value `TRUE` if the check digit is correct, otherwise return `FALSE`

Write pseudocode for the function `CheckNumber()`

Assume that the parameter is valid.

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