Input Script:

As MATLAB R2020b outputs values to 4 decimal places, the use of 'format long' allows the output values to display all digits.

```
format long
```

Following the step algorithm, setting epsion to equal 1 so that the smallest value can be determined, as this new determined value will be added to 1 giving a overall value greater to 1.

```
epsilon = 1
```

Beginning the loop section by stated if epsilon is greater than 1 then it must run the 'while' command. While epsilon continues to be greater than 1 then it must divide epsilon by 2 and this will repeat until the value of epsilon is less than 1. After each loop the previous calculated values of epsilon will be used to form the new value.

```
while 1 + epsilon > 1
    epsilon = epsilon/2
end
```

When epsilon is less than 1, a new value for epsilon will be formed by multiplying epsilon by 2. After this the script will stop and the final value of epsilon will be calculated.

```
epsilon = epsilon*2
```

MatLab contains a in-built 'eps' function that will produce a value for epsilon, this value will be compared with the value calcualted by the above script, the loop calculated values should equal to the validation value from the 'eps' function.

```
Validation = eps
```

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