Divisibility Rules

- A number is divisible by 2 if it is even or if its ones digit is divisible by 2.
- A number is divisible by 3 if the sum of its digits is divisible by 3.
- A number is divisible by 4 if its last two digits are divisible by 4 or if its tens digit is odd and its ones digit is 2 or 6 or if its tens digit is even and its ones digit is 0, 4 or 8.
- A number is divisible by 5 if its ones digit is 0 or 5.
- A number is divisible by 6 if it is even and it is divisible by 3. Or, if a number is divisible by both 2 and by 3, then it is divisible by 6.
- A number is divisible by 7, we invoke this recursive algorithm:
  Step 1.   Delete the last digit of the given number.
  Step 2.   Subtract twice this deleted digit from the remaining number.
  Step 3.   If the result is divisible by 7, the original number is divisible by 7.
- A number is divisible by 8 if its last three digits are divisible by 8 or if the hundreds digit is even, check the last two digits for divisibility by 8 or if the hundreds digit is odd, add 4 to the last two digits and check this new sum for divisibility by 8.
- A number is divisible by 9 if the sum of the digits results in a one-digit sum of 9.
- A number is divisible by 10 if its ones digit is 0.
- A number is divisible by 11, we invoke this recursive algorithm:
  Step 1.   Calculate the sum of the even numbered digits and the odd numbered digits.
  Step 2.   Find the absolute value of the difference of these sums.
  Step 3.   If the difference is divisible by 11, the number is divisible by 11.
- A number is divisible by 12 if it is divisible by both 3 and 4.