1. Look up SMOTE oversampling https://imbalanced-learn.org/stable/references/generated/imblearn.over_sampling.SMOTE.html .
    a. Describe what it is in your own words in markdown.
    b. Use this technique with the diabetes dataset. Comment on the model performance compared to other methods. Make sure you are clear about why you chose the performance metric you did.
2. Create a function called rec_digit_sum that takes in an integer. This function is the recursive sum of all the digits in a number.

    Given n, take the sum of all the digits in n. If the resulting value has more than one digit, continue calling the function in this way until a single-digit number is produced. The input will be a non-negative integer, and this should work for extremely large values as well as for single-digit inputs.

    Examples:

```
16  -->  1 + 6 = 7
942  -->  9 + 4 + 2 = 15  -->  1 + 5 = 6
132189  -->  1 + 3 + 2 + 1 + 8 + 9 = 24  -->  2 + 4 = 6
493193  -->  4 + 9 + 3 + 1 + 9 + 3 = 29  -->  2 + 9 = 11 --> 1 + 1 = 2
```