

Due **Wednesday, November 16**

You are encouraged to discuss the problems with others, however, are expected to write your own solutions.

1. Determine the check digit for the bank routing number 091 00 001.
2. If $a_1a_2 \dots a_{14}34$ is a valid credit card number, what is the check digit for a credit card number of the form $a_1a_2 \dots a_{14}5$?
3. If the Avis identification number $a_1a_2 \dots a_{11}8$ has check digit 5, what is the check digit for the Avis identification number $a_1a_2 \dots a_{11}6$?
4. Explain why an Illinois driving license number that ends with 77061 can not be valid.
5. What is the Soundex code for the surname "Zaharescu"?