You must solve the tasks individually.

• There are 50 points.

1. (20 points) **Set k\textsuperscript{th} digit**

   Implement the function \texttt{setKthDigit(n, k, d)} that takes three integers – \texttt{n}, \texttt{k}, \texttt{d} – where \texttt{n} is a possibly-negative int, \texttt{k} is a non-negative int, and \texttt{d} is a non-negative single digit int (between 0 and 9 inclusive). This function returns the number \texttt{n} with the \texttt{k}\textsuperscript{th} digit replaced with \texttt{d}. Counting starts at 0 and goes right-to-left, so the 0\textsuperscript{th} digit is the rightmost digit.

   For example:
   \[
   \begin{align*}
   \text{setKthDigit}(468, 0, 1) &= 461 \\
   \text{setKthDigit}(468, 1, 1) &= 418 \\
   \text{setKthDigit}(468, 2, 1) &= 168 \\
   \text{setKthDigit}(468, 3, 1) &= 1468 \\
   \text{setKthDigit}(468, 1, 0) &= 408 
   \end{align*}
   \]

2. (10 points) **Getting A**

   If you get more than 90% in a course, an A is (almost always) guaranteed. It is useful to keep track of your grades during the semester to find out if you could still get an A in a course or not.

   Implement the function \texttt{canGetA(pts, graded, total)} that takes as input the number of points \texttt{pts} you have in the course so far, the number of points \texttt{graded} that were already graded, and the \texttt{total} number of points of the course. The function returns \texttt{True} if it is still possible for you to get an A, and \texttt{False} otherwise.

   For example, \texttt{canGetA(50, 70, 100)} should return \texttt{False}.

3. (10 points) **Leap Year**

   A leap year is one that is divisible by 4 and not divisible by 100, except if it is divisible by 400.

   Implement the function \texttt{leapYear(y)} that returns \texttt{True} if the year \texttt{y} is a leap year, or \texttt{False} otherwise.

4. (10 points) **Age Calculator**

   The age of a person is determined by the date they were born.

   Implement the function \texttt{calculateAge(bd, bm, by, d, m, y)} that takes as input the birthday day, month, and year (\texttt{bd}, \texttt{bm}, \texttt{by}), and a date (\texttt{d}, \texttt{m}, \texttt{y}), and returns how old the person is on that date.

   For example, \texttt{calculateAge(15, 4, 1998, 25, 1, 2020)} should return 22.

   You may consider that the age of a person is increased on the first second of their birthday.