EmployeeListFRQ

Periodically, a company processes the retirement of some of its employees. In this question, you will write methods that help the company determine whether an employee is eligible to retire and to process the retirement of all eligible employees.

The `Employee` class is declared as follows:

```
public class Employee{
      //fields
      private int age;
      private int yearsOnJob;
      private double salary;
      private int id;
      //constructors not shown

      //methods
      public int getAge ( ){
            //returns the age (in years) of this employee
      }

      public int getYearsOnJob( ){
            //returns the number of years this employee has worked
      }

      public double getSalary( ){
            //returns the salary of this employee
      }

      public int getID( ){
            //returns the unique employee ID number
      }
}
```

The `Company` class is defined as follows:

```
public class Company{
     private int retireAge; //minimum age to retire
     private int retireYears; //minimum years on job needed to
retire
     private double retireSalary; //minimum salary to retire
     private int numRetireEligible;
     private Employee[] empList; //an array of all the employees

     //constructor not shown

     //methods


     /**
     * postcondition: returns true if an employee e is eligible to
     * retire; otherwise returns false.
     private boolean employeeIsEligible( Employee e )
     {
          //to be implemented in part a
     }

     /**
     * postcondition: updates the numRetireEligible field to
     * the total number of employees that are eligible for
     * retirement.
     private void updateNumRetireEligible( )
     {
          //to be implemented in part b
     }
     /**
     * postcondition: all retirement-eligible employees have been
     * removed from empList and empList has the correct size to
     * reflect non-retirements employees.
     */
     public void processRetirement( ){
          //to be implemented in part c
     }
}
```

Part A:
Write the `employeeIsEligible` method if he/she meets at least two of the following requirements:

1. The employee is at least `retireAge` years old
2. The employee has worked for at least `retireYears`
3. The employee's salary is at least `retireSalary`

The `employeeIsEligible` returns true if they are eligible to retire or false if they are not eligible.

Part B:
Write the method `updateNumRetireEligible`. This method should also update the field `numRetireEligible` to reflect the total number of employees that are eligible for retirement. It should not return anything, but rather just update the field based on the conditions of retirement eligibility and the array of employees. You may use your method written in part A, assuming it works as described by the postcondition.

Part C:
Write the method `processRetirement`. If an employee is eligible for retirement they should be removed from the array of employees. You may need to make a temporary array to add those employees who cannot retire, determine the size of this array, and use this newly created array to set the old empList. This method should not return anything, but rather update the empList array.