Exam Sets 12E
AP Computer Science A

Name _____ Period_____ Class (Check) □AP □ECS

1. Convert the following to decimal format..		
(a) 1111_{bin} **15**	(a) $5E4F_{hex}$ **24143**	(c) 671_{oct} **441**
		/3

2. Convert 178 to the following format		
(a) binary **10110010**	(b) hexadecimal **B2**	(c) octal **262**
		/2

_____/20

2. The toBase10 class below, prompts a user for a number base (2 thru 9) and an integer. The program then converts the integer to its base 10 equivalent. When the program has finished the value of the base 10 equivalent should be store in the variable result.

```
public class toBase10{
   public static void main(String args[]){

      int result = 0;

      Scanner s = new Scanner(System.in);
            System.out.println("Enter the base to convert from (2 thru 9)");
            int from = s.nextInt();
            System.out.println("Enter the number you want to convert");
            int num = s.nextInt();



      int place = 0;

            //converts the number to base 10

            while(num > 0){

                  result += num%10*Math.pow(from, place);
                  num = num/10;
                  place++;
            }
```

Score _____/20

2. The fromBase10 class below, prompts the user for a base 10 integer and number base (2 thru 9). The program then converts the base 10 integer to the base specified by the user. When the program has finished the value of the specified base equivalent should be store in the variable result.

```
public class toBase10{
   public static void main(String args[]){

      int result = 0;

      Scanner s = new Scanner(System.in);
            System.out.println("Enter a base 10 integer");
            int num = s.nextInt();
            System.out.println("Enter the base you want to convert to  (0 thru 9)");
            int to = s.nextInt();




      int position = 0;
            while(tempBase10 > 0){
                  result += (int)((tempBase10%to)*Math.pow(10, position));
                  tempBase10 = tempBase10/to;
                  position++;


            }
```

Score _____/20

Score _____/20