Question answer related to static method

Q1. Write a java program that implements a calculater using methods and switch cases.

```
import java.util.*;

class Q1
 {
	public static int Addition(int x, int y)
	{
		return x+y;
	}
	public static int Subtraction(int x, int y)
	{
		return (int)Math.abs(x-y);
	}
	public static int Multiplication(int x, int y)
	{
		return x*y;
	}
	public static double Division(int x, int y)
	{
		return (double)x/y;
	}
	public static int Remainder(int x, int y)
	{
		return x%y;
	}
	public static void main(String[] args)
	{
		 Scanner sc = new Scanner(System.in);
		 System.out.println("Enter first number: ");
		 int no1 = sc.nextInt();
		 System.out.println("Enter second number: ");
		 int no2 = sc.nextInt();
		 System.out.println("+ for addition, - for subtraction,  * for Multiplication, / for
Division, % for Remainder");
		 System.out.println("Enter your choice: ");
		 int ch = sc.next().charAt(0);
		 switch(ch)
		 {
			case '+': System.out.println("Sum = "+Addition(no1, no2)); break;
```

```
                        case '-': System.out.println("Diff = "+Subtraction(no1, no2)); break;
                        case '*': System.out.println("Multiplication = "+Multiplication(no1, no2));
break;
                        case '/': System.out.println("Division = "+Division(no1, no2)); break;
                        case '%': System.out.println("Remainder = "+Remainder(no1, no2));
break;
                        default: System.out.println("Wrong input");
                }
        }
}
```

Q2. Write a java program that checks if a pair is an amicable pair or not using methods.

```
import java.util.*;

class Q2
{
        public static int sum_of_factor(int n)
        {
                int sum = 0;
                for(int i = 1;i<=n/2;i++)
                        if(n%i==0)
                                sum += i;
                return sum;
        }
        public static void main(String[] args)
        {
                 Scanner sc = new Scanner(System.in);
                 System.out.println("Enter first number: ");
                 int no1 = sc.nextInt();
                 System.out.println("Enter second number: ");
                 int no2 = sc.nextInt();
                 if(sum_of_factor(no1)==no2 && sum_of_factor(no2)==no1)
                 {
                                 System.out.println(no1+" and "+no2+" are amicable numbers");
                 }
                 else
                 {
                                 System.out.println(no1+" and "+no2+" are not amicable
numbers");
                 }
        }
}
```

Q3. Write a java program that checks if a number is twisted prime (number and its reverse both are prime) or not using methods.

```
import java.util.*;

class Q3
{
	public static boolean isPrime(int n)
	{
		for(int i = 2;i<=n/2;i++)
			if(n%i==0)
				return false;
		return true;
	}
	public static int reverse(int n)
	{
		int rev = 0;
		while(n>0)
		{
			rev = rev*10 + n%10;
			n /=10;
		}
		return rev;
	}
	public static void main(String[] args)
	{
		 Scanner sc = new Scanner(System.in);
		 System.out.println("Enter a number: ");
		 int number = sc.nextInt();
		 int rev = reverse(number);
		 if(isPrime(number) && isPrime(rev))
		 {
				System.out.println(number+" is twisted prime");
		 }
		 else
		 {
				System.out.println(number+" is not twisted prime");
		 }

	}
}
```