Worksheet 12

Static Methods for Temperature Conversion

Study the main program below. Write two methods so that this main program operates correctly.

to_fahrenheit(celsius)

to_kelvin(celsius)

To convert from C to F (0°**C** × 9/5) + 32 = 32°**F**	To convert from C to K 0°**C** + 273.15 = 273.15**K**

Make your program output EXACTLY as shown in the sample session below.

Main Program

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

   double celsius = 0.0;

   Scanner keybd = new Scanner(System.in);

   System.out.print("Enter a temperature in Celsius (e.g. 20) > ");
   celsius = keybd.nextDouble();
   System.out.println("You entered " + celsius + " degrees celsius.");
   System.out.println();


   System.out.println("Fahrenheit: " + to_fahrenheit(celsius) + " degrees F");
   System.out.println("Kelvin: " + to_kelvin(celsius) + " degrees K");



} //main
```

Sample Sessions

```
Enter a temperature in Celsius (e.g. 20) > 20
You entered 20 degrees celsius.


Fahrenheit: 68.0 degrees F
Kelvin: 293.15 degrees K
```

```
Enter a temperature in Celsius (e.g. 20) > -40
You entered -40 degrees celsius.


Fahrenheit: -40.0 degrees F
Kelvin: 233.14999999999998 degrees K
```