Lab 13

Instructions: Complete the steps below. Be sure to show your code to one of the lab TAs before you leave, so that you can receive credit for this lab. You must also upload a copy of all your source code (.java) files to the link on Blackboard by **11:59 PM on Monday October 19, 2020 for L01, L02, L03, L05 and by 11:59 PM on Thursday October 15, 2020 for L06, L07, L08 and L09**.

1. The are of a pentagon can be computed using the following formula:

$$Area = \frac{5 \times s^2}{4 \times \tan(\frac{\pi}{5})}$$

   Write a method that returns the area of a pentagon using the following header:

```
public static double area(double side)
```

   Write a main method that prompts the user to enter the side of a pentagon and display its area. Here is a sample run:

   Enter the side: 5.5
   The area of the pentagon is 52.04444136781625

2. Twin primes are a pair of prime numbers that differ by 2. For example, 3 and 5 are twin primes, 5 and 7 are twin primes, and 11 and 13 are twin primes. Write a program to find all twin primes less than 1,000. Display the output as follows:
   (3, 5)
   (5, 7)
   …

Grading Guidelines: This lab is graded on a scale of 0-6 points, assigned as follows:

- **0 points:** Student is absent or does not appear to have completed any work for the lab
- **2 point (2*1):** Student has written the program, but it has errors.
- **4 points (2*2):** Student has written the program it compiles without error, but it does not produce the correct output.
- **6 points (2*3):** Student has written the program and it compiles and runs correctly, without any errors.