Assignment 7

Date due: Monday, 3/19, 10:30 AM

Objectives:

1. Develop an algorithm to determine the type of triangle given the lengths of its sides.
2. Implement a program that calculates the area of a circle given its radius.

Instructions:

Write the Java code for the following problems:

1. Create a Java class named Triangle that represents a triangle. The class should have the following methods:
   - `__init__(self, side1, side2, side3)`: Constructor that initializes the sides of the triangle.
   - `area(self)`: Returns the area of the triangle using Heron's formula.

2. Write a Java program named Circle that calculates the area of a circle. The program should:
   - Prompt the user for the radius of the circle.
   - Calculate and display the area of the circle using the formula $A = \pi r^2$.

Submit your code in a single Java file named `Assignment7.java`.