```
1  using System;
2  using NUnit.Framework;
3  using OO_Tasks_Interface;
4
5
6  namespace OO_Tasks {
7      [TestFixture]
8      public class Test_Interface {
9          private Square _sq1, _sq2;
10         private Rectangle _rec1, _rec2;
11         private Circle _cir1, _cir2;
12
13         [SetUp]
14         protected void SetUp() {
15             _sq1 = new Square("Square_One", "red", 5);
16             _sq2 = new Square("Square_Two", "red", 6.6);
17
18
19             _rec1 = new Rectangle("Rectangle_One", "blue", 5, 4);
20             _rec2 = new Rectangle("Rectangle_Two", "blue", 7.1, 3.5);
21
22             _cir1 = new Circle("Circle_One", "black", 6);
23             _cir2 = new Circle("Circle_Two", "black", 4.2);
24         }
25
26         [Test]
27         public void TestSquare() {
28
29             // Tests Perimeter
30             Assert.AreEqual(20, _sq1.GetPerimeter());
31             Assert.AreEqual(26.4, _sq2.GetPerimeter());
32
33             // Tests for Area
34             Assert.AreEqual(25, _sq1.GetArea()) ;
35             Assert.AreEqual(43.56, _sq2.GetArea());
36         }
37
38         [Test]
39         public void TestRectangle() {
40             // Tests Perimeter
41             Assert.AreEqual(18, _rec1.GetPerimeter());
42             Assert.AreEqual(21.2, _rec2.GetPerimeter());
43
44             // Tests for Area
45             Assert.AreEqual(20, _rec1.GetArea()) ;
46             Assert.AreEqual(24.85, _rec2.GetArea());
47         }
48
49         [Test]
50         public void TestCircle() {
51
52             double circum = Math.Round(2 * 3.142 * 6, 2);
53             double area = Math.Round(6 * 6 * 3.142, 2);
54
55             double circum2 = Math.Round(2 * 3.142 * 4.2, 2);
56             double area2 = Math.Round(4.2f * 4.2 * 3.142, 2);
```

```
57
58
59              // Tests Perimeter
60              Assert.AreEqual(_cir1.GetPerimeter(), _cir1.GetCircumference());
61              Assert.AreEqual(circum, _cir1.GetCircumference());
62              Assert.AreEqual(circum, _cir1.GetPerimeter());
63
64              Assert.AreEqual(circum2, _cir2.GetCircumference());
65              Assert.AreEqual(circum2, _cir2.GetPerimeter());
66
67
68              // Tests for Area
69              Assert.AreEqual(area, _cir1.GetArea());
70
71              Assert.AreEqual(area2, _cir2.GetArea());
72          }
73      }
74  }
```