Isosceles Triangle, two edges have the same length;
Scalene Triangle, no edges have the same length;
Right Triangle, one of its interior angle is 90 degrees (or a **right angle**).

2. The **Area** A of triangle with base b and height h is $A = 0.5 \times b \times h$
3. The **Perimeter** p of a triangle with three sides: a, b, and c is $p = a + b + c$.
4. The **Heron's Formula**: The area A of a triangle with 3 sides: a, b, c, is $A = sqrt(s \times (s-a) \times (s-b) \times (s-c))$, where $s = 0.5 \times p$ (the **Semi-Perimeter** of the triangle).
5. The radius r of the Triangle's **Inner Circle** with area A and the semi-perimeter s is $r = A/s$.
6. The radius R of the Triangle's **Outer Circle** with 3 sides: a, b, c and area A is $R = a \times b \times c/(4 \times A)$.
7. In **Trigonometry**, the **Law of Cosines** (a.k.a. the **Cosine Formula** or the **Cosine Rule**) is a statement about a general triangle that relates the lengths of its sides to the cosine of one of its angles. See the scalene (middle) triangle in Figure 7.2. With the notation described there, we have: $c^2 = a^2 + b^2 - 2 \times a \times b \times cos(\gamma)$. This formula can be rewritten for the other two angles α and β.
8. In Trigonometry, the **Law of Sines** (a.k.a. the **Sine Formula** or the **Sine Rule**) is an equation relating the lengths of the sides of an arbitrary triangle to the sines of its angle. See the scalene (middle) triangle in Figure 7.2. With the notation described there, we have: $\frac{a}{\sin(\alpha)} = \frac{b}{\sin(\beta)} = \frac{c}{\sin(\gamma)}$.
9. In Trigonometry, the **Pythagorean Theorem** specializes the Law of Cosines. The Pythagorean theorem is only correct for right triangles. If the angle γ is a right angle (of measure 90° or $\pi/2$ radians), then $cos(\gamma) = 0$, and thus the law of cosines reduces to: $c^2 = a^2 + b^2$.
10. In Trigonometry, the **Pythagorean Triple** is a triple with three positive integers a, b, and c, such that $a^2 + b^2 = c^2$. Such a triple is commonly written as (a, b, c). A well-known example is $(3, 4, 5)$. If (a, b, c) is a Pythagorean triple, then so is (ka, kb, kc) for any positive integer k. A **Primitive Pythagorean Triple** is one in which a, b, and c are coprime. Primitive Pythagorean Triples describe the three integer side lengths of a Right Triangle, although the converse may not be true.

Programming Exercises related to Triangles (and possibly Circles again):

1. UVa 143 - Orchard Trees (counting integer points in triangle)
2. UVa 190 - Circle Through Three Points (triangle's outer circle)
3. UVa 438 - The Circumference of the Circle (triangle's outer circle)
4. UVa 10195 - The Knights Of The Round Table (triangle's inner circle, Heron's formula)
5. UVa 10286 - The Trouble with a Pentagon (Law of Sines)
6. UVa 10347 - Medians (given 3 medians of a triangle, find its area)
7. UVa 10991 - Region (Heron's formula, Law of Cosines, area of sector)
8. UVa 11152 - Colourful Flowers (triangle's inner and outer circle, Heron's formula)
9. UVa 11437 - Triangle Fun