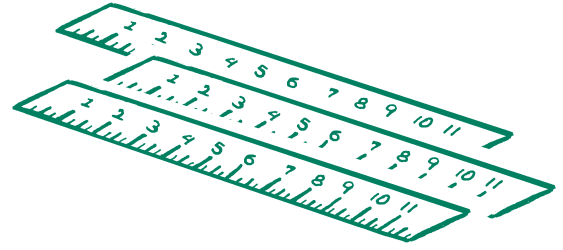
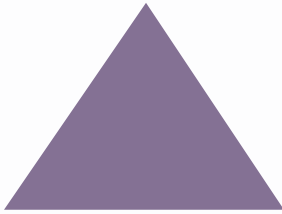


## TAMPERING WITH TRIANGLES

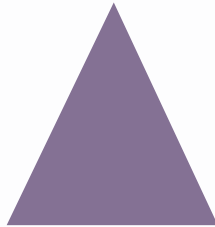
**W**hat could be simpler than a triangle? It's a shape with three interconnected sides of any length. But actually, there are all kinds of triangles. Triangles may vary by the **length of their sides**:



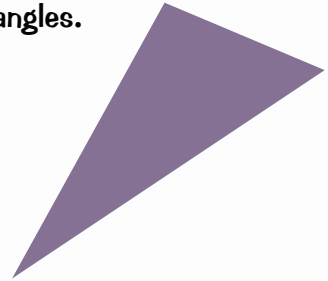
Triangles with three sides of equal length are equilateral triangles.



Triangles with two sides of equal length are isosceles triangles.

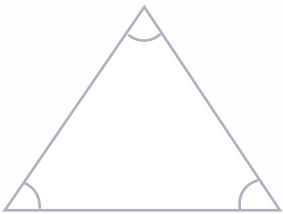


Triangles with three different sides are scalene triangles.

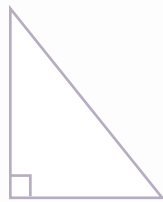


But that's not all! Triangles can also be sorted by their **angles**:

A triangle is equiangular (and, therefore, equilateral) if all its angles are congruent (same).



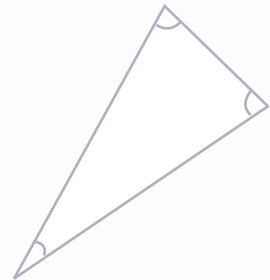
A triangle is a right triangle if one of its angles measures 90 degrees (and two of its sides are perpendicular to each other).



A triangle is obtuse if one of its angles is larger than 90 degrees.



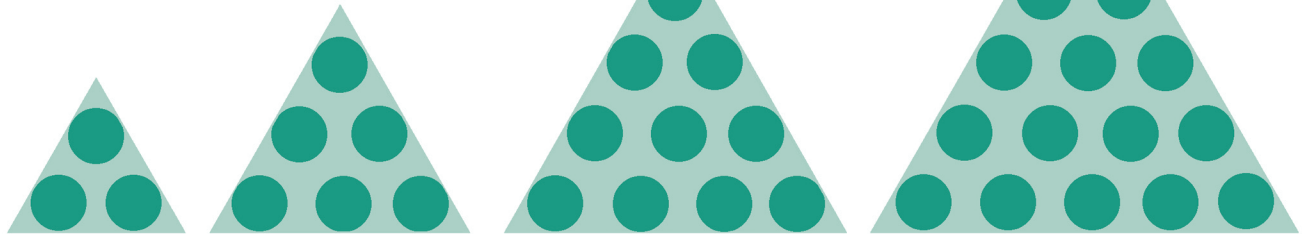
A triangle is acute if all three of its angles are smaller than 90 degrees.



## Triangle Numbers

Triangular numbers are found in the number of dots that can be used to make an equilateral triangle (triangle with three equal sides). The following illustrations represent 3, 6, 10, and 15.

**Can you see a pattern here?**



$$1 + 2 = 3$$

$$1 + 2 + 3 = 6$$

$$1 + 2 + 3 + 4 = 10$$

$$1 + 2 + 3 + 4 + 5 = 15$$

**Draw a picture or add numbers to find the next three triangular numbers.**

The next three numbers are 21, 28, and 36.

The only angle from which to approach a problem is the try angle!



## The Last Straw

If you take three drinking straws, you can easily arrange them into one triangle that has three equal sides. Now, suppose you have six drinking straws. Can you arrange them into **FOUR** triangles, all with equal sides?

**HINT:-**You may need some tape!

