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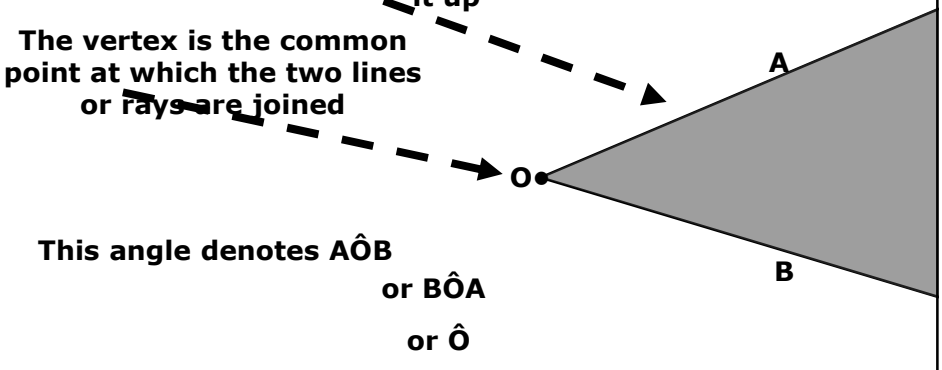
ANGLES

DEF.: **an angle is a shape, formed by two lines or rays diverging from a common point (the vertex).**

The legs (sides) of an angle are the two lines that make it up

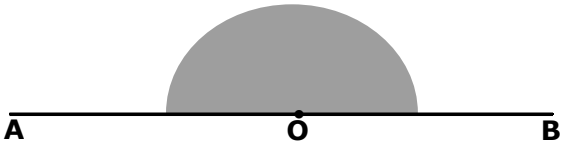
The vertex is the common point at which the two lines or rays are joined



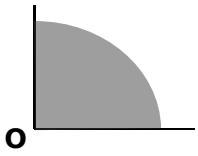
This angle denotes AÔB
or BÔA
or Ô

1

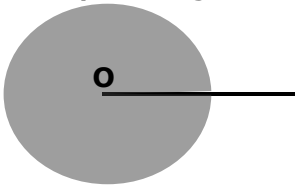
Straight angle (180° half turn) is formed when the legs are pointing in exactly opposite directions.



Right angle (90° a quarter of a turn) is exactly the half of the straight angle

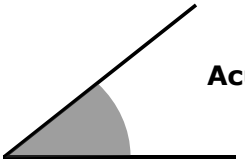


Full angle (360° complete turn) is an angle formed by 2 coincident half lines



2

DEF.: **An acute angle is an angle whose measure is less than a right angle**



Acute angle

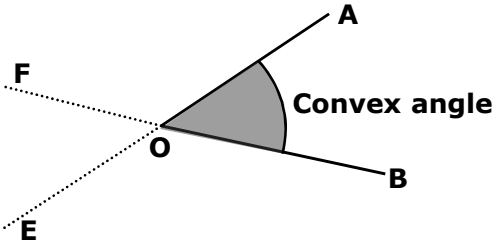
DEF.: **Un obtuse angle is an angle**

1. **greater than a right angle**
2. **less than a straight angle**

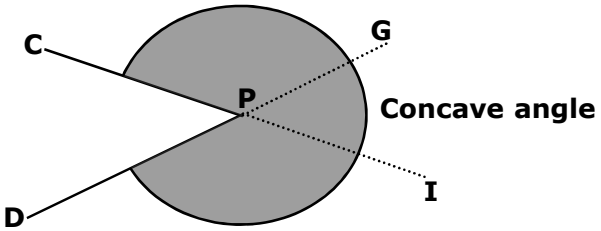
Obtuse angle

3

DEF.: **An angle is convex when the extention of its legs is outside the angle**



concave angle when the extension of its legs lies inside the angle



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CLASSIFICATION by sides

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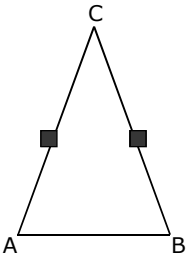
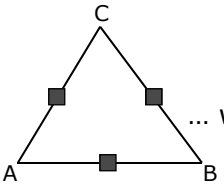
A TRIANGLE

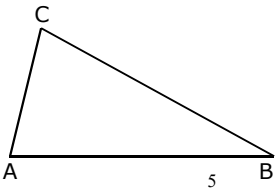
… with two of its sides equal in length is called **isosceles**





… with all three sides equal in lenght is called **equilateral**

… with all three sides different in lenght is called **scalene**



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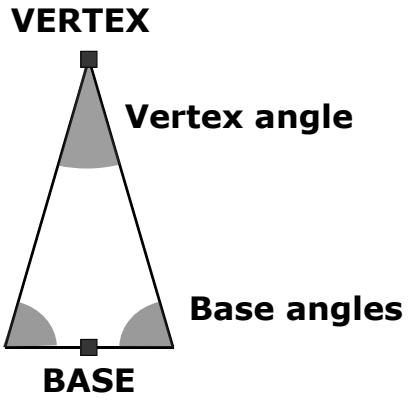
In the **isosceles triangle**



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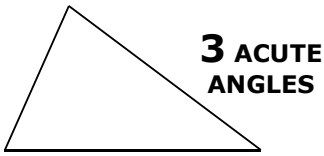
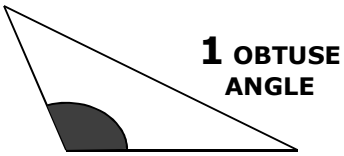
CLASSIFICATION by **ANGLES**



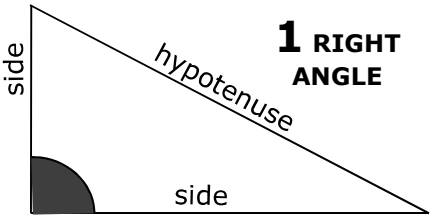
3 ACUTE ANGLES

ACUTE TRIANGLE



1 OBTUSE ANGLE

OBTUSE TRIANGLE



1 RIGHT ANGLE

RIGHT TRIANGLE

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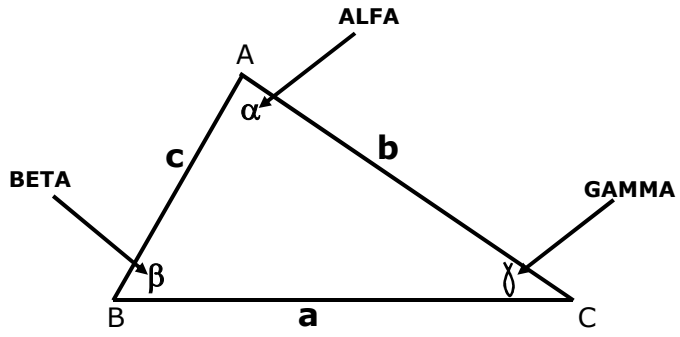
CONVENTION



δ ← **DELTA**

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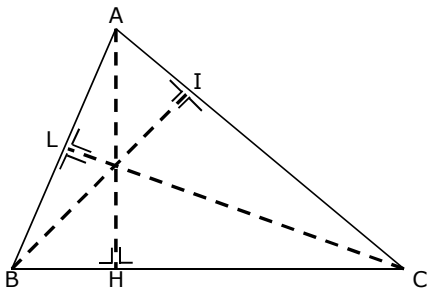
ALTITUDE

The ALTITUDE of a triangle is the perpendicular from the base to the opposite vertex:

1. A vertex(A)
2. A point on the base perpendicular to the vertex(H)



Symbol ⊥ ∟

There are three possible ALTITUDES in a triangle, one for each vertex

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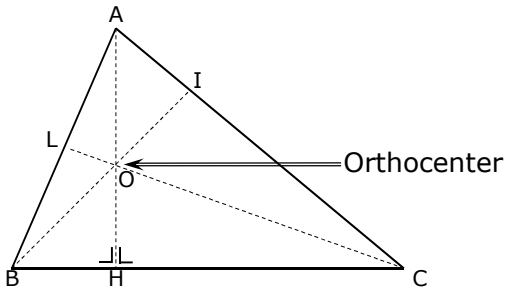
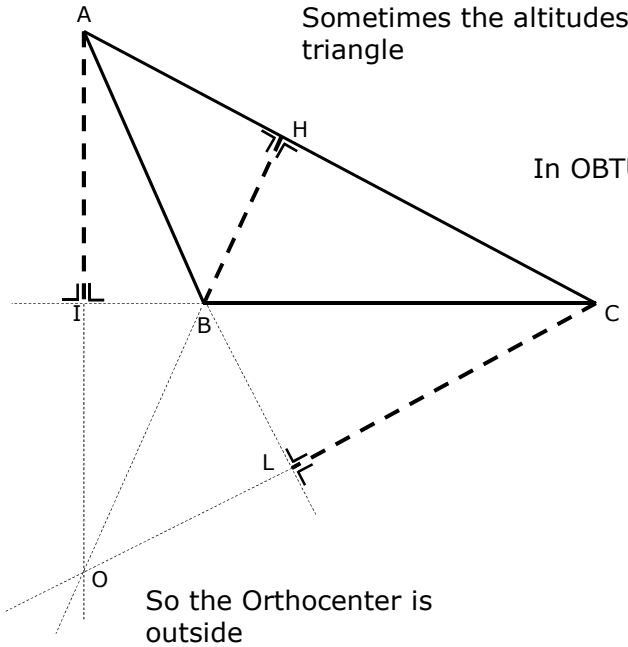
ORTHOCENTER

The point where the three altitudes of a triangle intersect is called Orthocenter



10



Sometimes the altitudes are outside the triangle

In OBTUSE TRIANGLES

So the Orthocenter is outside

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