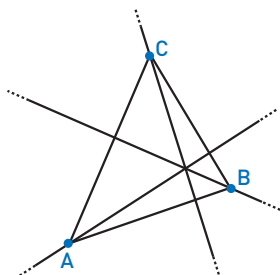


YOU & MATHS The three heights of a triangle

- a.** Use dynamic geometry software to construct a triangle.
- b.** Then construct its heights.
- c.** Drag the triangle's vertices.
- d.** What do you notice?

a. and **b.** Your triangle will look something like this.



c. and **d.** No matter whether the heights meet «inside» or «outside» the triangle, they are always concurrent, that is, they all three intersect in a point. This is an invariant property that you can see in your dynamic geometry file and it can be proved by a formal geometric proof.