Constructions

Geometric Constructions ... **Animated!**

|  |  |  |
| --- | --- | --- |
| Compass | "Construction" in [Geometry](http://www.mathsisfun.com/geometry/index.html) means to draw shapes, angles or lines accurately.These constructions use only compass, straightedge (i.e. ruler) and a pencil.This is the "pure" form of geometric construction - no numbers involved! | straightedge |
| straightedge |

|  |
| --- |
| Learn these two first, they are used a lot: |
| Line Bisector | [Line Bisector](http://www.mathsisfun.com/geometry/construct-linebisect.html) |
| Angle Bisector | [Angle Bisector](http://www.mathsisfun.com/geometry/construct-anglebisect.html) |
| And it is useful to know how to do 30°, 45° and 60° angles. You can use the angle bisector method (above) to create other angles, such as 15°, etc: |
| 30 Degree Angle | [30 Degree Angle](http://www.mathsisfun.com/geometry/construct-30degree.html) |
| 45 Degree Angle | [45 Degree Angle](http://www.mathsisfun.com/geometry/construct-45degree.html) |
| 60 Degree Angle | [60 Degree Angle](http://www.mathsisfun.com/geometry/construct-60degree.html) |
| Equilateral Triangle | [Equilateral Triangle](http://www.mathsisfun.com/geometry/construct-equitriangle.html) |
| Points and Lines: |
| Perpendicular to a Point on a Line | [Perpendicular to a Point on a Line](http://www.mathsisfun.com/geometry/construct-perponline.html) |
| Perpendicular to a Point NOT on a Line | [Perpendicular to a Point NOT on a Line](http://www.mathsisfun.com/geometry/construct-perpnotline.html) |
| Parallel Line through a Point | [Parallel Line through a Point](http://www.mathsisfun.com/geometry/construct-paranotline.html) |
| Same (Congruent) Angle | [Same (Congruent) Angle](http://www.mathsisfun.com/geometry/construct-anglesame.html) |
| Cut a line into N segments | [Cut a line into N segments](http://www.mathsisfun.com/geometry/construct-segment3.html) |
| Circles: |
| Center of a Circle | [Center of a Circle](http://www.mathsisfun.com/geometry/construct-circlecenter.html) |
| Point to Tangents on a Circle | [Point to Tangents on a Circle](http://www.mathsisfun.com/geometry/construct-circletangent.html) |
| Inscribe a Circle in a Triangle | [Inscribe a Circle in a Triangle](http://www.mathsisfun.com/geometry/construct-triangleinscribe.html) |
| Circumscribe a Circle on a Triangle | [Circumscribe a Circle on a Triangle](http://www.mathsisfun.com/geometry/construct-trianglecircum.html) |
| Circle touching 3 Points | [Circle touching 3 Points](http://www.mathsisfun.com/geometry/construct-circle3pts.html) |
| And for the "Master Class", a Pentagon |
| Pentagon | [Pentagon](http://www.mathsisfun.com/geometry/construct-pentagon.html) |