Geometric Constructions

1. Bisect a segment using construction techniques
2. Construct a right angle (i.e. a perpendicular line)
3. Construct an angle bisector of a given angle
4. Create a 45° angle using the angle bisector method
5. Create a 30° angle
6. Create a 60° angle
7. Create a 15° angle
8. Construct an equilateral triangle
9. Construct a perpendicular to a point on a line
10. Construct a perpendicular to a point NOT on a line
11. Construct a parallel line through a point not on the line
12. Construct an angle congruent to a given angle
13. Cut a line into N segments using construction techniques
14. Construct the center of a given circle
15. Construct a tangent line from a given point to a circle
16. Inscribe a circle in a triangle using construction techniques
17. Circumscribe a circle about a given triangle
18. Construct a circle touching 3 given points
19. Construct a pentagon

Video solutions are at:

<https://www.mathsisfun.com/geometry/constructions.html>

Geometric Constructions

Example of steps to create a line segment bisector

Steps:

* Place the compass at one end of line.
* Adjust the compass to slightly longer than half the line length
* Draw arcs above and below the line.
* Keeping the same compass width, draw arcs from other end of line.
* Place ruler where the arcs cross, and draw the line.

SOURCE: <https://www.mathsisfun.com/geometry/constructions.html>