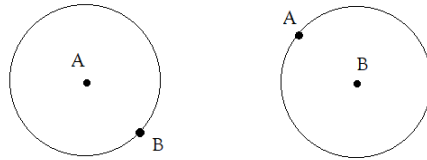


UW Math Circle

A drawing compass is a tool that can be used to draw circles. Given a two points A and B , we can draw a circle in the two ways seen below:



A straight edge is a ruler without markings. Using only a compass and straight edge, try to do the following (make sure to keep track of each of your moves in the construction!):

1. Construct a 60 degree angle
2. Construct a line segment of length $\sqrt{2}$ (you can assume that your compass can draw a circle of radius 1)
3. Construct a line segment of length the golden ratio
4. Construct a perpendicular bisector of a given line segment
5. Inscribe a circle in a given square
6. Inscribe a square in a given circle
7. Construct an equilateral triangle
8. Construct a square
9. Construct a regular pentagon
10. Construct a regular hexagon
11. Find the midpoint of a given line segment