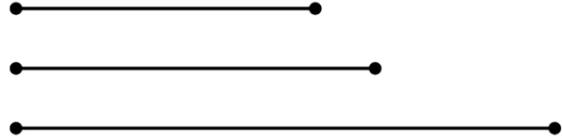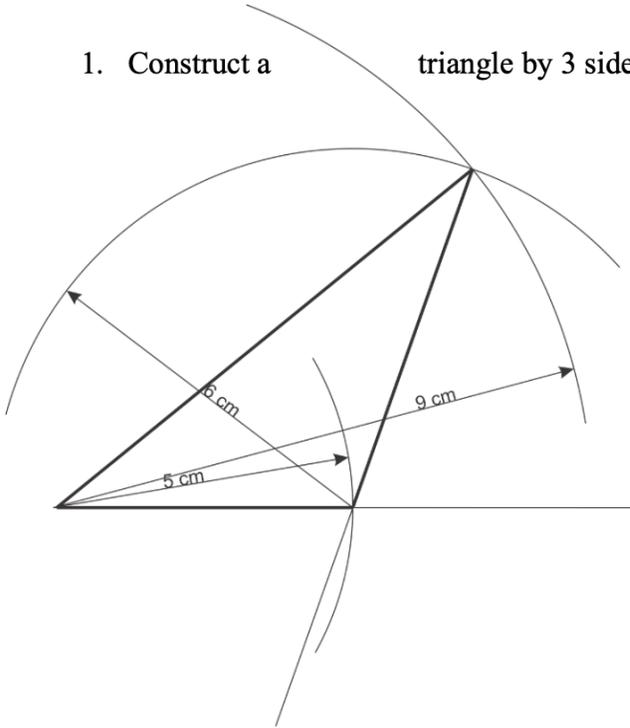# Math 5. Homework. Construction with compass.
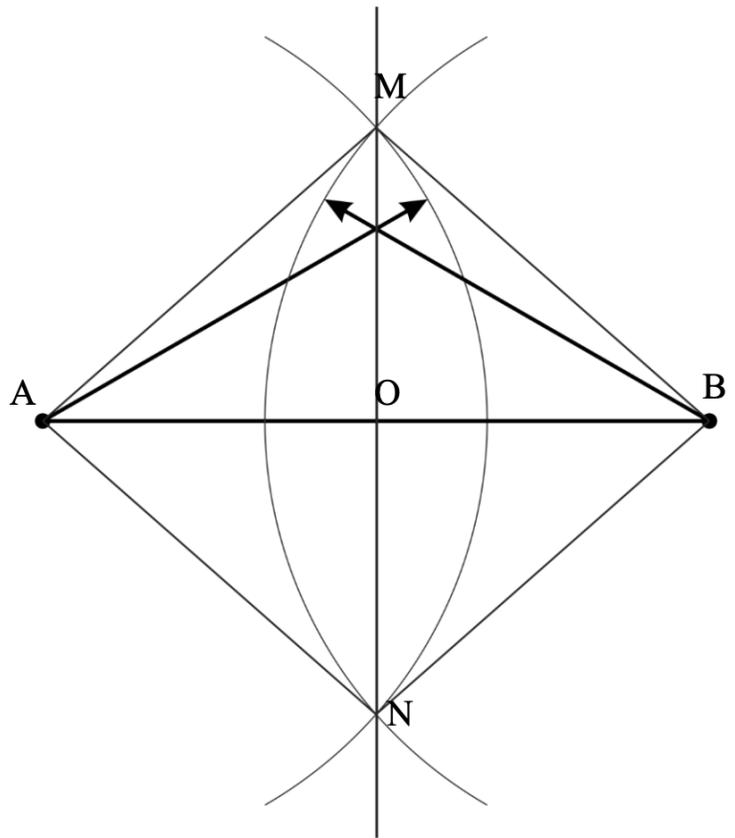
What we learned in class:

1. Construct a   triangle by 3 sides.

6 cm

9 cm

5 cm

2. Divide a segment into two equal parts.
   $[AM] = [MB] = [AN] = [NB]$
   Triangles AMB and ANB are isosceles and congruent
   Triangles AMN and MNB are isosceles and congruent. Angle $\angle AMN = \angle NMB$, so MN is a bisector of the angle $\angle AMB$. In isosceles triangle this bisector is a median and altitude. So, point O is a midpoint of a segment [AB].

M

A   O   B

N

Homework:

1. Construct a perpendicular to a line, passing through the point on the line.

2. Construct a perpendicular to a line, passing through the point outside the line.

3. Construct an isosceles triangle by a leg and the altitude, drawn to this leg.