12.1-12.2 Congruence Properties and Constructions

Congruent-- two shapes are congruent if every corresponding measurable quantity for each of them is the same. (Notation: ≅)

Similar--two shapes are similar if they are the exact same shape, but they are scaled versions of each other. (Notation: ~)
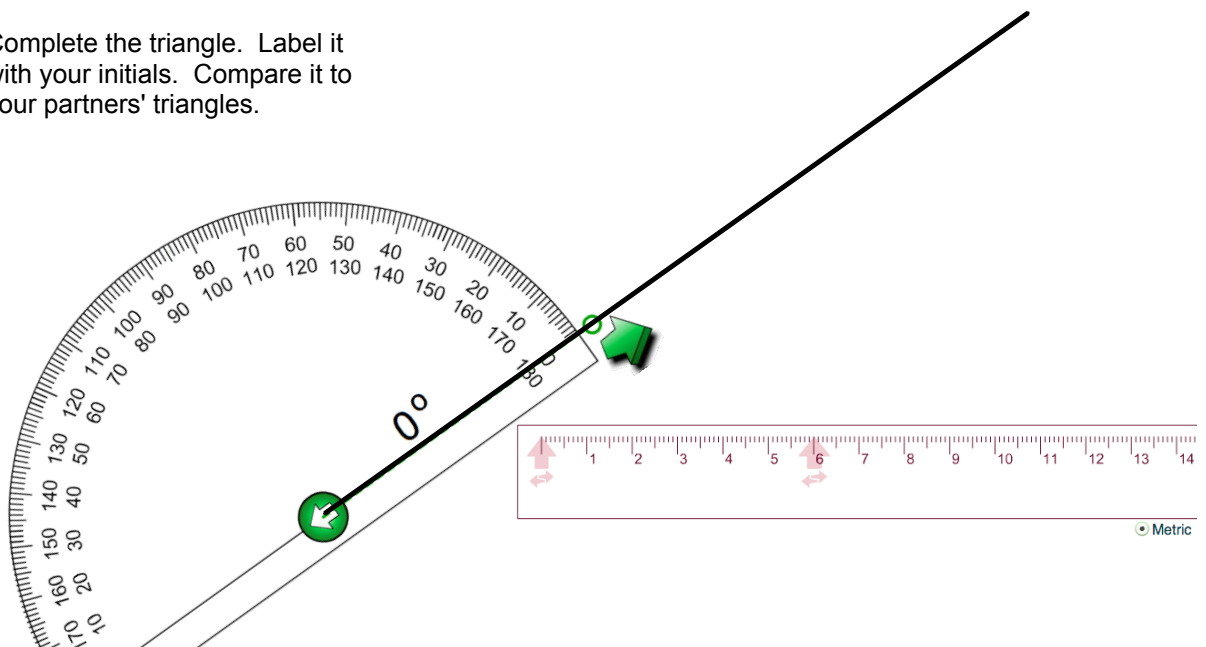
Example: (Triangles)

① Draw a segment of length 6 cm on your paper.
   Do not make it horizontal or vertical.

   At one end, draw a 40º angle.
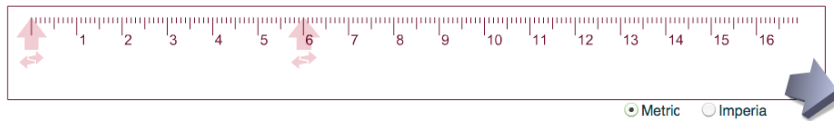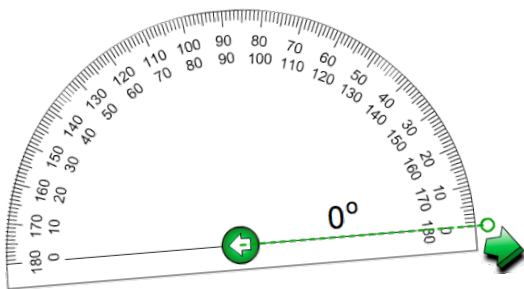
   At the other end draw a 70º angle.

   Complete the triangle. Label it
   with your initials. Compare it to
   your partners' triangles.

②

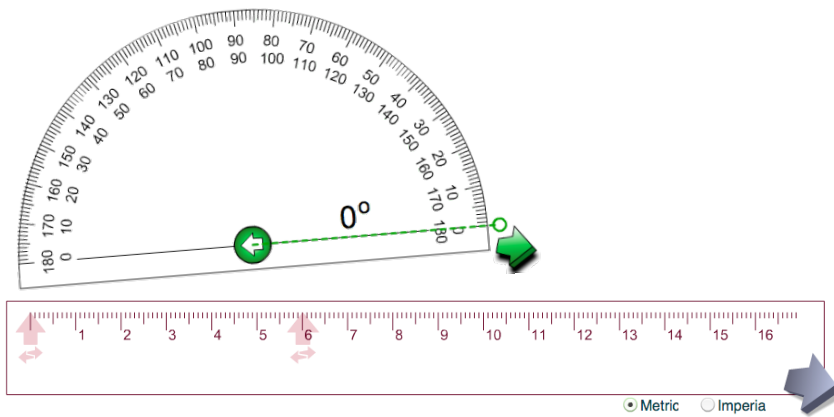Draw a 120º angle on your paper.

Make one side of the angle 6 cm and the other 8 cm. Complete the triangle.
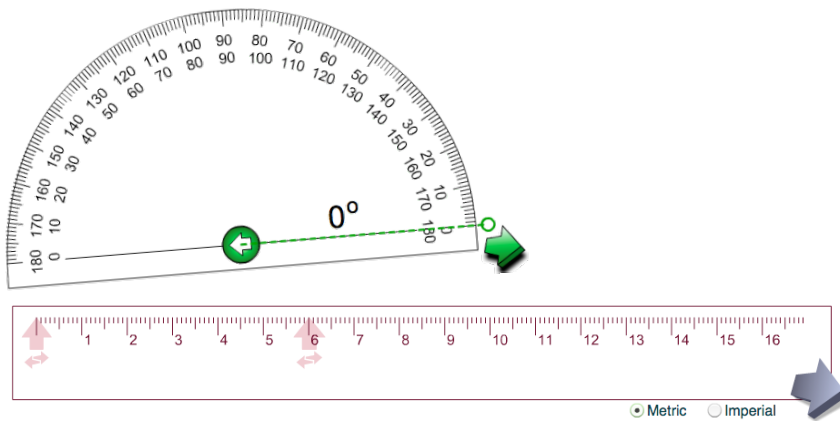
③
Draw a triangle with these parts - in order

Side 8 cm.   Angle 50°   Next angle (not
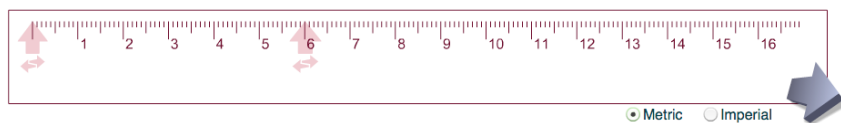on the 8cm. segment) 70°

④ Draw this one:

Angle = 40°   Side = 8 cm   Side = 6cm
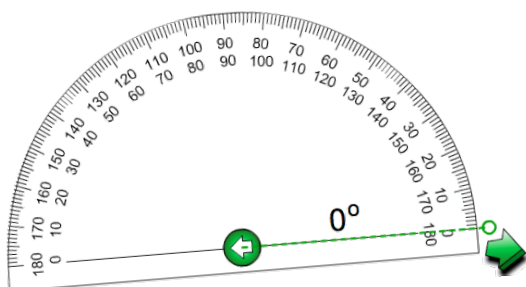The angle is NOT between the two sides.

⑤   Draw a triangle with these three sides:
3 cm   5 cm   6 cm

⑥
Draw one with these three angles:

50°, 30°, 100°

Congruence Theorems:

SSS

SAS

ASA

AAS

SSA

(Note: Page 727 table in book is really useful.)

Prove that opposite sides and angles of a parallelogram are congruent.