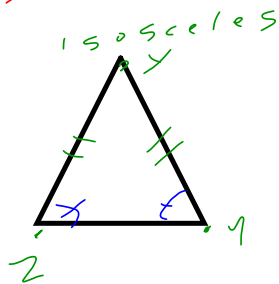
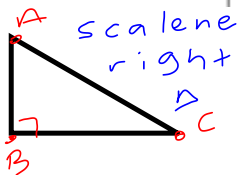
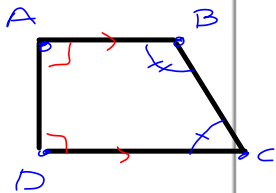



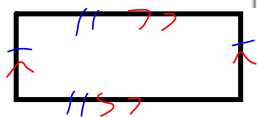
Lesson 1: Properties of Polygons and Drawing Triangles

Name of Shape and Drawing	Which line segments are congruent?	Which line segments are parallel?	Which line segments are perpendicular?	Which angles are congruent?
	$\overline{AC} \cong \overline{BD} \cong \overline{AB}$ $\overline{BD} \cong \overline{AB}$	$\overline{AC} \parallel \overline{BD}$ $\overline{AB} \parallel \overline{CD}$		$\angle A \cong \angle D$ $\angle B \cong \angle C$

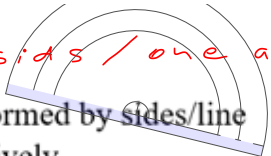


$\overline{AB} \perp \overline{BC}$

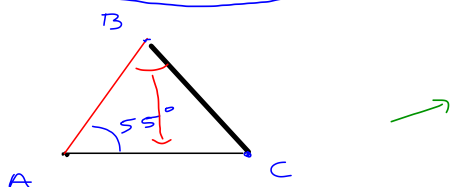
Name of Shape and Drawing	Which line segments are congruent?	Which line segments are parallel?	Which <u>line segments</u> are perpendicular?	Which angles are congruent?
		$\overline{AB} \parallel \overline{DC}$	$\overline{AB} \perp \overline{AD}$ $\overline{AD} \perp \overline{DC}$	$\angle A \cong \angle D$



PART B: DRAWING TRIANGLES

given 2 sides / one angle 

Example: Draw $\triangle ABC$ whose $\angle A$ measures 55 degrees and is formed by sides/line segments \overline{AC} and \overline{AB} that measure 4 cm and 3 cm long, respectively.



sides forming angle
sides "next to" angle

What sides are adjacent to $\angle BAC$? AC AB

Which line segment is opposite to $\angle BAC$? BC

↳ across from angle.

What side is opposite to $\angle CBA$? AC

Which line segments are adjacent to $\angle CBA$? BA BC

step i. draw initial side and label end points.

step ii. At appropriate vertex use protractor.

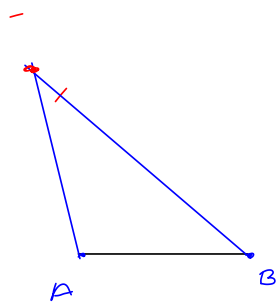
step iii draw 2nd side appropriate length.

LABEL. → angles

P.4.

→ 2 angles one side

Example: Draw $\triangle ABC$ that has $\angle A$ of 105 degrees and $\angle C$ of 35 degrees. \overline{AB} measures 3.5 cm.



step i. Find 3rd missing angle.

$$\angle B = 180^\circ - \angle A - \angle C$$

total angles = 180°

$$\angle B = 40^\circ$$

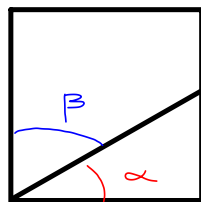
step ii draw one initial side.

step iii Draw 2 appropriate angles

step iv. Extend side lengths. where they meet is vertex.

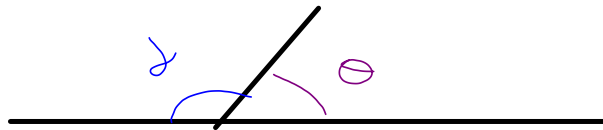
• Do other questions
• Answer key in back.

Complementary Angles : add up to 90°

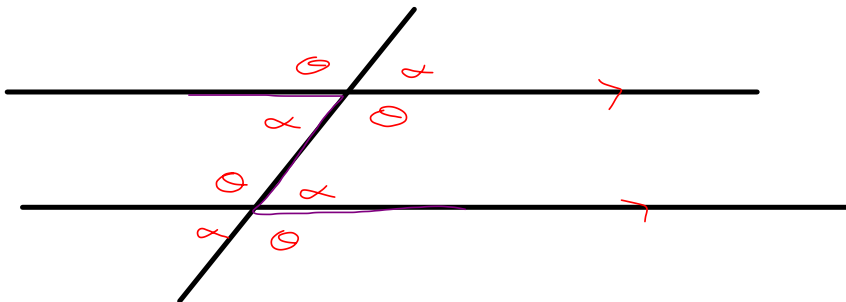


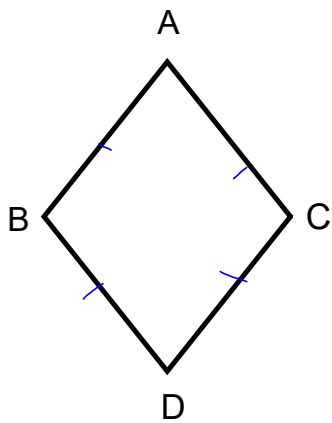
example
 $\alpha + \beta = 90^\circ$

Supplementary Angle : add up to 180°



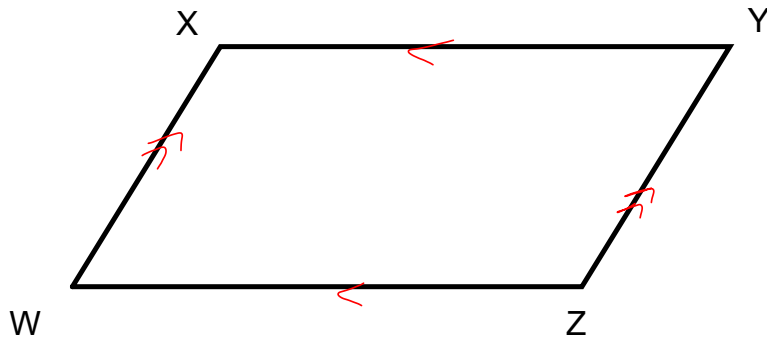
$\delta + \theta = 180^\circ$





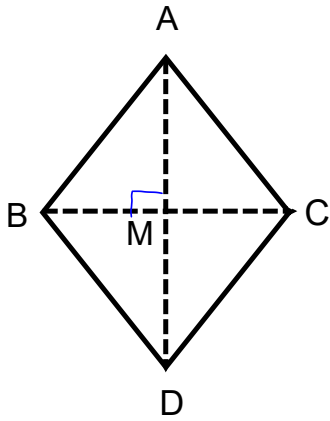
Label

$$\overline{AB} \cong \overline{AC} \cong \overline{CD} \cong \overline{DB}$$



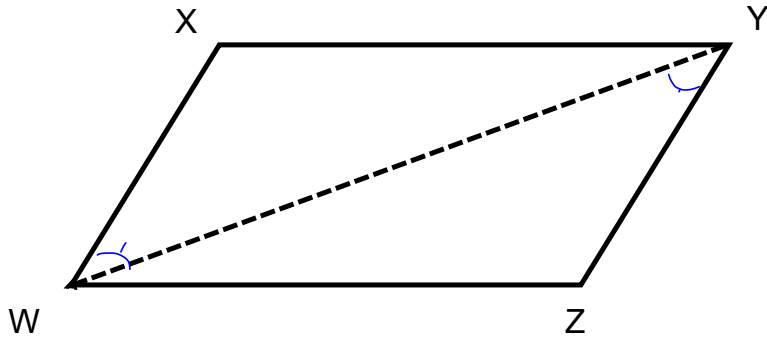
$$\overline{XY} \parallel \overline{WZ}$$

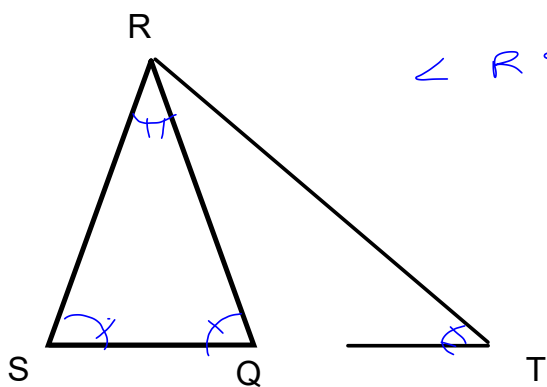
$$\overline{YZ} \parallel \overline{WX}$$



$\overline{AD} \perp \overline{BC}$

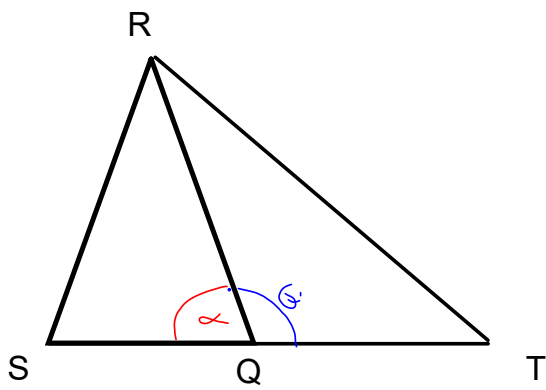
$$\angle XWY \cong \angle ZYW$$





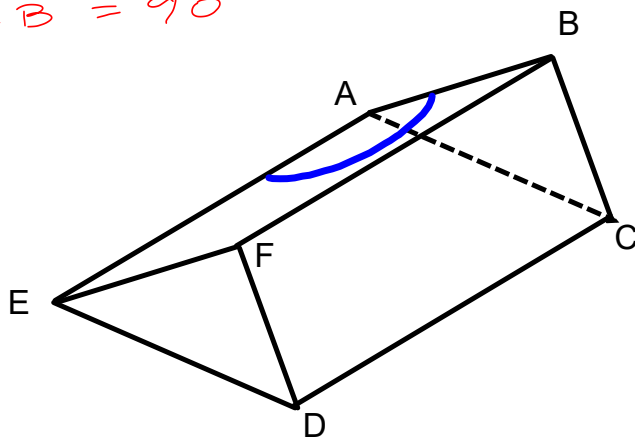
$$\angle SRQ \cong \angle QTR$$

$$\angle RSQ \cong \angle RQS$$



Label a
supplementary
angle
to α

Label
 $\angle EAB = 90^\circ$



HWK
p 186 #13
p 188
#20 #22