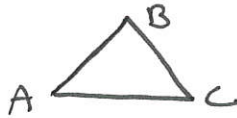


4-2 Angles of Triangles

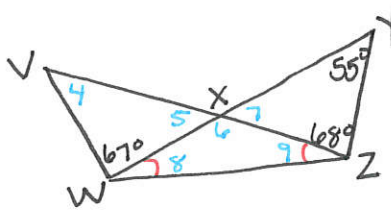
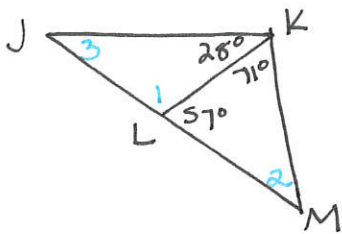
Triangle-Angle-Sum Theorem

The sum of the \angle s of a \triangle is 180° :

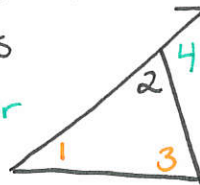
$$m\angle A + m\angle B + m\angle C = 180$$



Ex: Find the numbered angles.



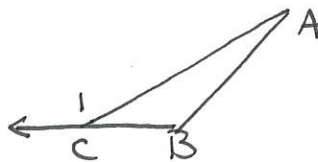
* When a side of a \triangle is extended, the exterior angle ($\angle 4$) has 2 nonadjacent remote interior \angle s ($\angle 1$ & $\angle 3$).



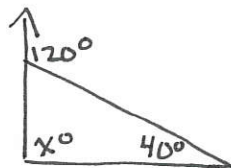
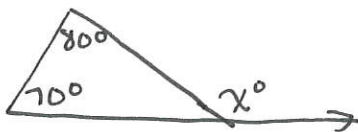
Exterior Angles Theorem

The measure of an exterior \angle of a \triangle is equal to the sum of the remote interior \angle s.

$$m\angle 1 = m\angle A + m\angle B$$



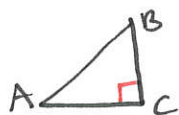
Ex: Find x .



Corollary: a theorem with a proof that follows as a direct result of another theorem.

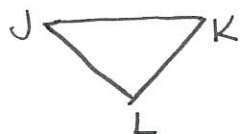
Corollaries to the Δ - \angle -Sum Theorem

The acute \angle s of a right Δ are complementary



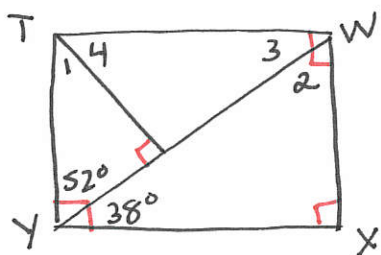
If $\angle C$ is a right \angle , then $\angle A$ & $\angle B$ are complementary.

There can be at most one right or obtuse \angle in a Δ .



If $\angle L$ is right or obtuse, then $\angle J$ & $\angle K$ must be acute.

EX: Find the numbered \angle s.



$$m\angle 1 =$$

$$m\angle 2 =$$

$$m\angle 3 =$$

$$m\angle 4 =$$