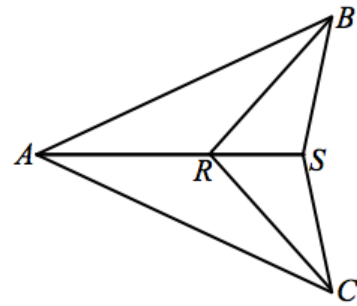# Lesson 27: Triangle Congruency Proofs
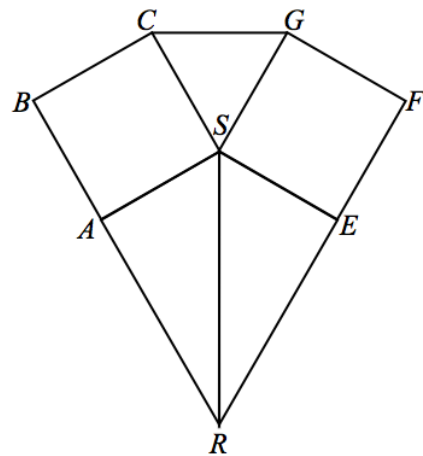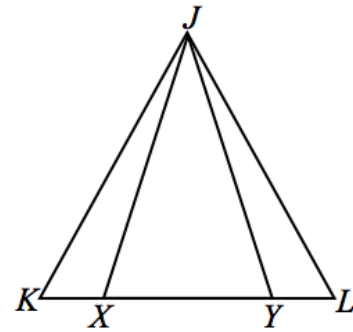
Classwork

Exercises

1. Given: $AB = AC, RB = RC$.
   Prove: $SB = SC$.
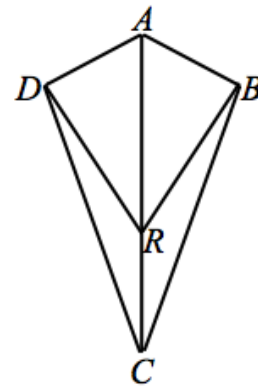

2. Given: Square $ABCS \cong$ Square $EFGS$,
   $\overleftrightarrow{RAB}, \overleftrightarrow{REF}$.
   Prove: $\triangle ASR \cong ESR$.
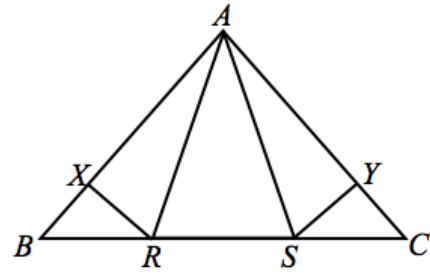
3. Given: $JK = JL, JX = JY$.
    Prove: $KX = LY$.
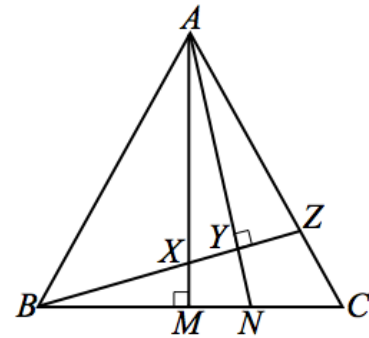

4. Given: $AD \perp DR, AB \perp BR,$
                $\overline{AD} \cong \overline{AB}$.
    Prove: $\angle DCR = \angle BCR$.

5. Given: $AR = AS, BR = CS,$
                $RX \perp AB, SY \perp AC.$
    Prove: $BX = CY.$

6. Given: $AX = BX, \angle AMB = \angle AYZ = 90°.$
    Prove: $NY = NM.$

Problem Set

Use your knowledge of triangle congruence criteria to write a proof for the following:

In the figure $\overline{BE} \cong \overline{CE}$, $DC \perp AB$, $BE \perp AC$, prove $\overline{AE} \cong \overline{RE}$.