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Mr. Schlansky

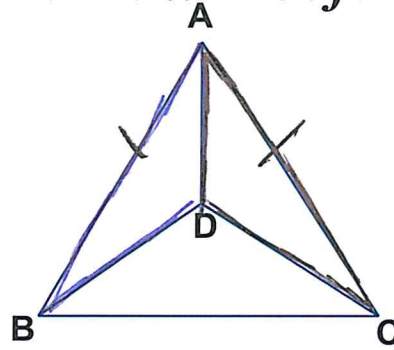
Date _____
Geometry



Proving Triangles Isosceles Mini Proofs

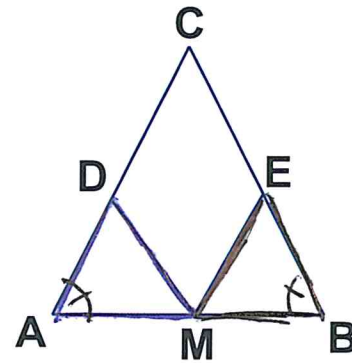
1. Given: $\triangle ADB \cong \triangle ADC$
Prove: $\triangle BAC$ is isosceles

statements	Reasons
① $\triangle ADB \cong \triangle ADC$	① given
② $\overline{AB} \cong \overline{AC}$	② CPCTC
③ $\triangle BAC$ is isosceles	③ An isosceles triangle has two congruent sides.



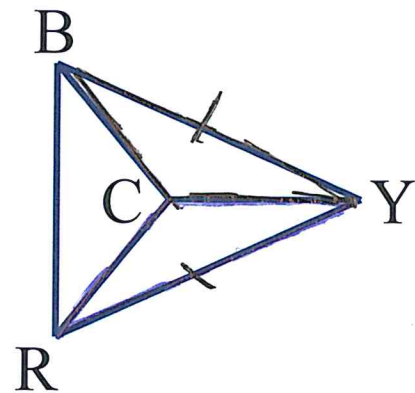
2. Given: $\triangle ADM \cong \triangle BEM$
Prove: $\triangle ACB$ is isosceles

statements	Reasons
① $\triangle ADM \cong \triangle BEM$	① given
② $\angle DAM \cong \angle EBM$	② CPCTC
③ $\triangle ACB$ is isosceles	③ An isosceles triangle has two congruent angles



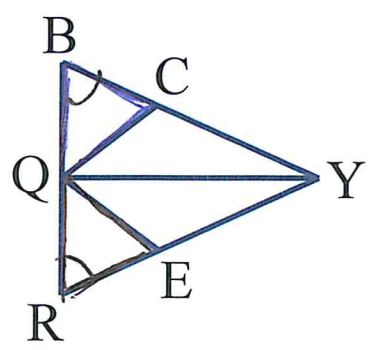
3. Given: $\triangle YCB \cong \triangle YCR$
Prove: $\triangle BYR$ is isosceles

statements	Reasons
① $\triangle YCB \cong \triangle YCR$	① given
② $\overline{YB} \cong \overline{YR}$	② CPCTC
③ $\triangle BYR$ is isosceles	③ An isosceles triangle has two congruent sides



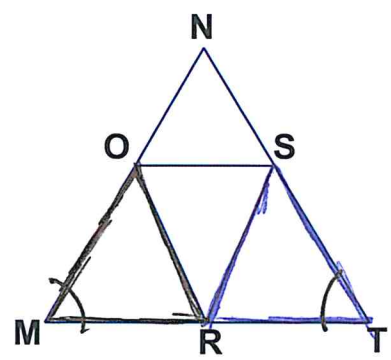
4. Given: $\Delta BQC \cong \Delta RQE$
 Prove: ΔBYR is isosceles

Statements	Reasons
① $\Delta BQC \cong \Delta RQE$	① given
② $\angle CBQ \cong \angle ERQ$	② CPCTC
③ ΔBYR is isosceles	③ An isosceles triangle has two congruent angles



5. Given: $\Delta MOR \cong \Delta TSR$
 Prove: ΔMNT is isosceles

Statements	Reasons
① $\Delta MOR \cong \Delta TSR$	① given
② $\angle OMR \cong \angle STR$	② CPCTC
③ ΔMNT is isosceles	③ An isosceles triangle has two congruent angles.



6. Given: $\Delta PRA \cong \Delta AIP$
 Prove: ΔPTA is isosceles

Statements	Reasons
① $\Delta PRA \cong \Delta AIP$	① given
② $\angle APR \cong \angle PAI$	② CPCTC
③ ΔPTA is isosceles	③ An isosceles triangle has two congruent angles.

