November 04, 2015

Honors Geometry

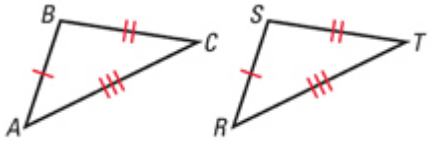
Notes Section 4.4

Prove Triangles Congruent by SSS

POSTULATE 19 **Side-Side-Side (SSS) Congruence Postulate**

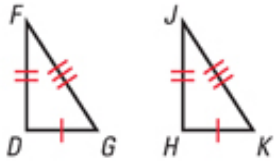
If three sides of one triangle are congruent to three sides of a second triangle, then the two triangles are congruent.

If Side $\overline{AB} \cong \overline{RS}$,
Side $\overline{BC} \cong \overline{ST}$, and
Side $\overline{CA} \cong \overline{TR}$,
then $\triangle ABC \cong \triangle RST$.

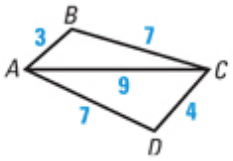


EXAMPLE 1 Decide whether the congruence statement is TRUE. Explain.

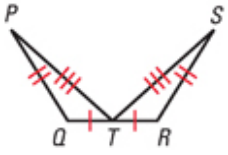
a)



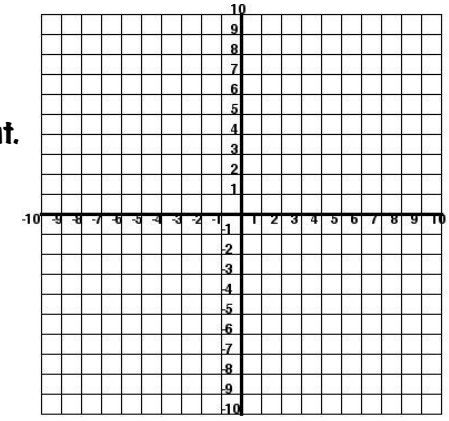
b)



c)



EXAMPLE 2 ΔJKL has vertices J(-3,2), K(0,2) and L(-3,-3).
ΔRST has vertices R(1,0), S(1,-3) and T(4,0).
Graph the triangles and show they are congruent.



EXAMPLE 3 Explain why figure A is more stable than figure B.