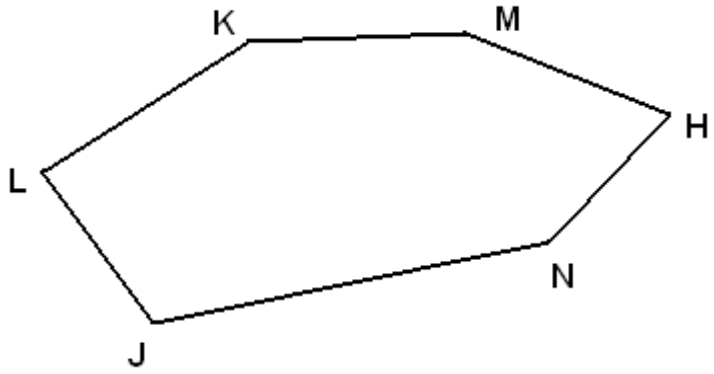
Introduction to Congruent Figures

Polygon: A connected set of at least three coplanar line segments such that each segment intersects only two others, one at each endpoint.

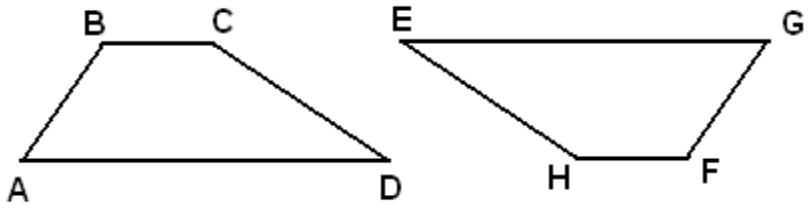
Congruent: (From earlier in the course) Two figures are congruent if they have the "same size and shape".



Name the polygon on the right in as many valid ways as possible.

Correspondence:

The figures on the right are congruent.

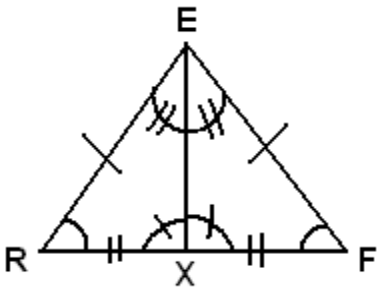


Polygon Congruence Postulate

Two polygons are congruent if and only if there is a correspondence between them such that

[EX1] If quadrilateral ABCD is congruent to quadrilateral WFMJ, what do we automatically know?

[EX2] In the figure, prove that ΔREX is congruent to ΔFEX



[EX3]

Given: $\overline{AB} \cong \overline{CD}$

$\overline{AB} \parallel \overline{CD}$

E is the midpoint of $\overline{BC}$ and $\overline{AD}$

Prove: $\triangle AEB \cong \triangle DEC$