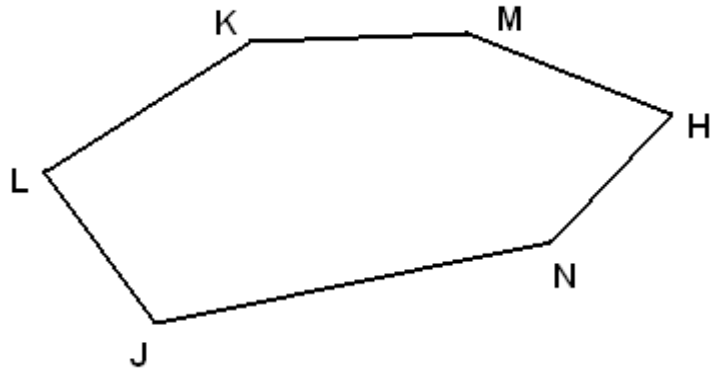


## Introduction to Congruent Figures

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

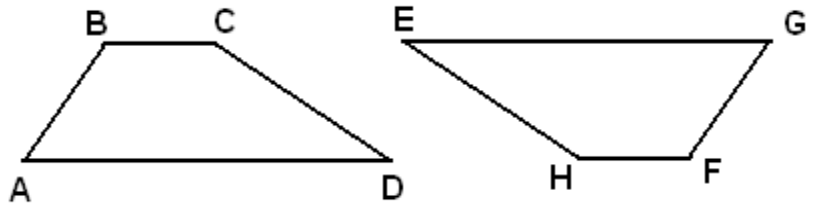
**Congruent:** (From earlier in the course)  
Two figures are congruent if they have the "same size and shape".



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

**Correspondence:**

The figures on the right are congruent.



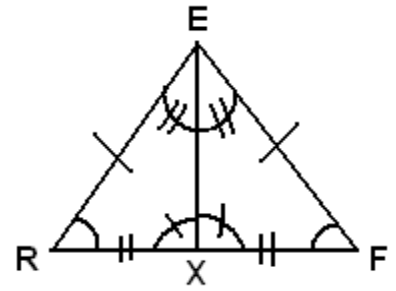
### **Polygon Congruence Postulate**

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  $\triangle REX$  is congruent to  $\triangle FEX$



[EX3]

Given:  $\overline{AB} \cong \overline{CD}$ ,  $\overline{AB} \parallel \overline{CD}$   
E is the midpoint of  $\overline{BC}$  and  $\overline{AD}$

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

