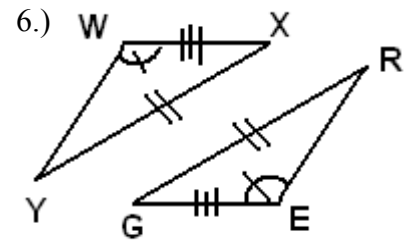
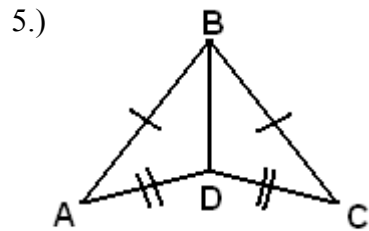
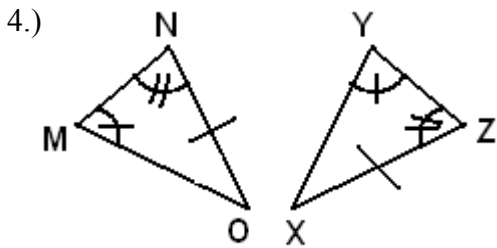
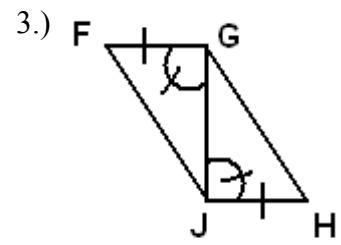
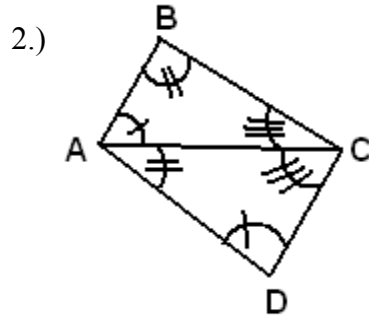
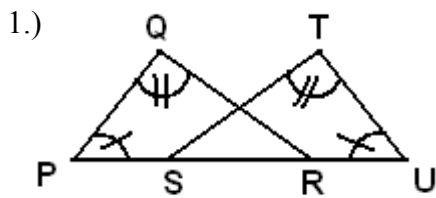


**Advanced Geometry**  
**Triangle Congruence**

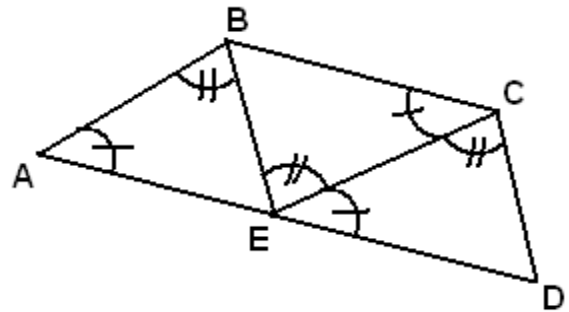
Name: \_\_\_\_\_

In Problems 1-6, is it possible to prove a pair of triangles congruent? If so, write a statement and name the reason you know it is true.



For Problems 7-9, examine the figure on the right.

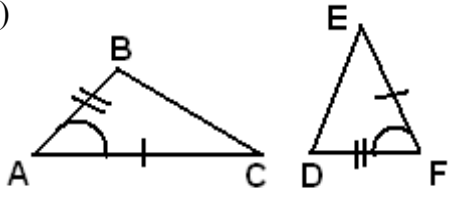
- 7.)  $\triangle ABE$  is congruent to  $\triangle CEB$  by ??
- 8.)  $\triangle EDC$  is congruent to  $\triangle CBE$  by ??
- 9.)  $\triangle EDC$  is congruent to  $\triangle AEB$  by ??



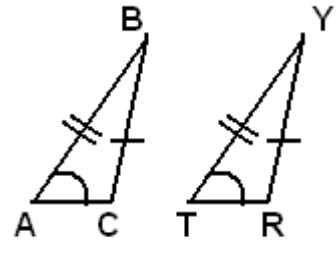
- 10.) Of the triangles described below, which two are congruent and how do you know you are correct?
  - (A)  $\triangle XYZ$  :  $m\angle X = 40^\circ$ ,  $XY = 9$  cm, and  $m\angle Y = 30^\circ$
  - (B)  $\triangle ABC$  :  $AB = 9$  cm,  $m\angle B = 30^\circ$ , and  $m\angle A = 80^\circ$
  - (C)  $\triangle KLM$  :  $m\angle L = 30^\circ$ ,  $m\angle M = 110^\circ$ , and  $KL = 9$  cm

In Problems 1-8, are the triangles congruent? If so, write a correspondence and state why you are correct. (These are NOT drawn to scale.)

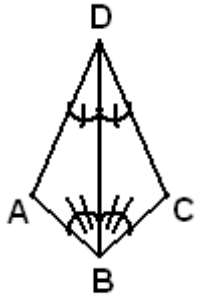
1.)



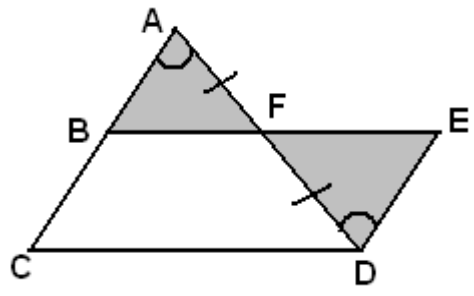
2.)



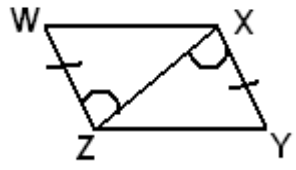
3.)



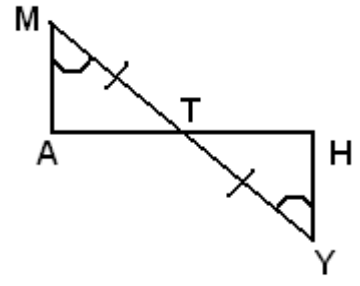
4.)



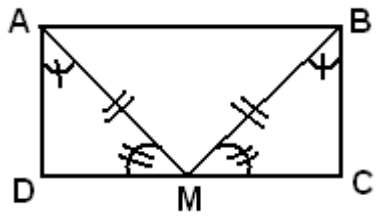
5.)



6.)



7.)



8.)

