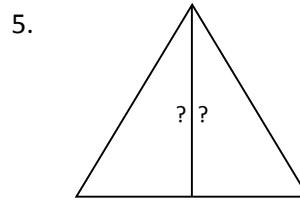
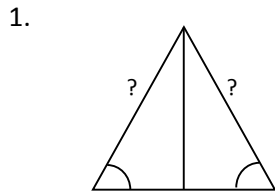


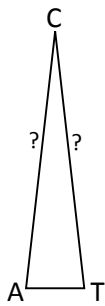
Name _____ Date _____

Geometry Lab 4.6 – Finding Congruent Pairs of Sides and Angles

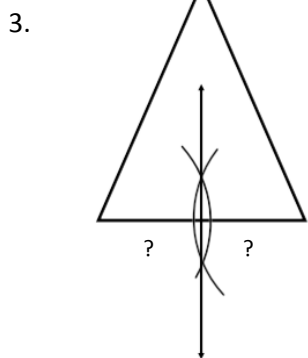
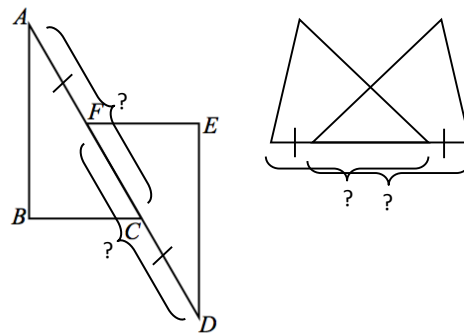
Using the diagrams, determine the main concept behind the each piece of given information in terms of deducing that two question mark **sides** are congruent. Some would require more than one step; none is strictly “given”.



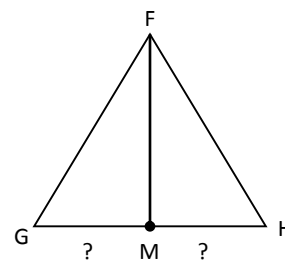
2. Given CAT is isosceles



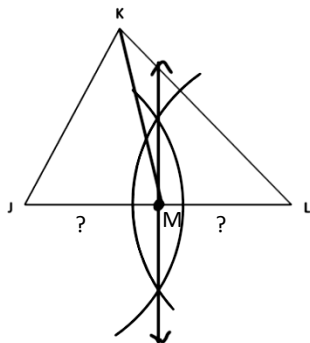
6. (2 possibilities)



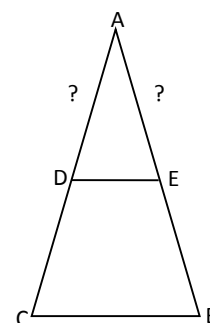
7. M is the midpoint of \overline{GH}



4. \overline{KM} is a median of $\triangle JKL$

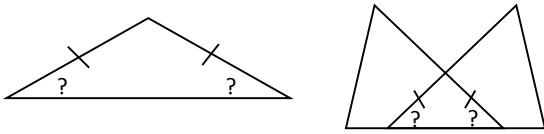


8. D bisects \overline{AC} ;
E bisects \overline{AB} ;
 $\overline{AC} \cong \overline{AB}$

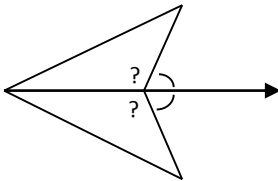


Using the diagrams, determine the main concept behind each piece of given information in terms of deducing that the two question mark **angles** are congruent. Some may take more than one step, and none is strictly "given".

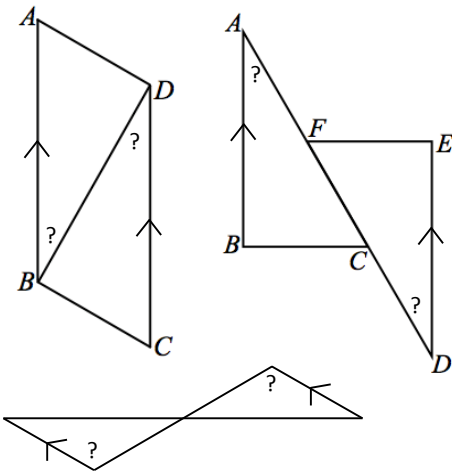
1.



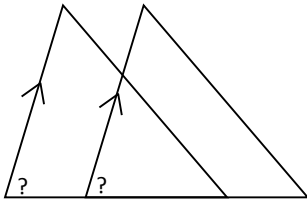
2.



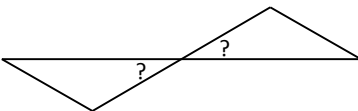
3.



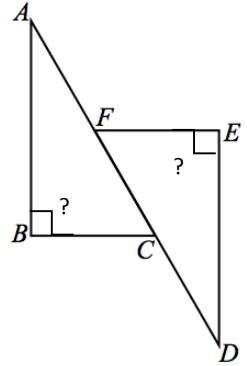
4.



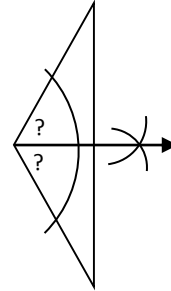
5.



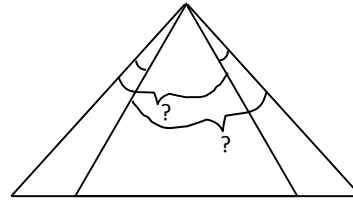
6.



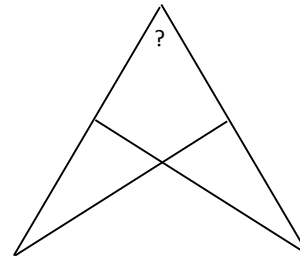
7.



8. (2 possibilities)



9.



10. Halves of congruent angles are _____.

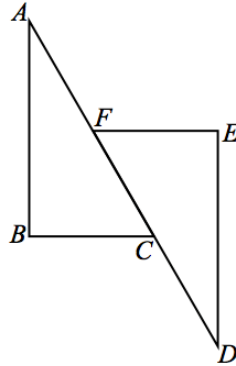
11. Altitude of a triangle (_____ to base)

PRACTICE – You write the given (finish for homework if necessary)

Using the illustration at right, decide what information you would give in order for a classmate to be able to prove that $\triangle ABC \cong \triangle DEF$ using $SAS \cong SAS$ differently for each example. Be more creative than *all* straightforward “givens” for each piece of information and decorate your drawing each time. Then write the proof.

1) Using $\angle A$ & $\angle D$ as included angles

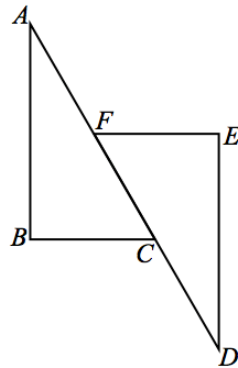
Given:



Actual Proof:

2) Using $\angle B$ & $\angle E$ as included angles

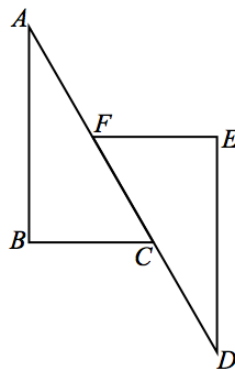
Given:



Actual Proof:

3) Using $\angle BCA$ & $\angle FED$ as included angles

Given:

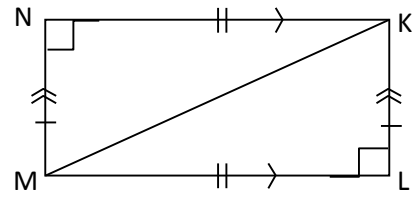


Actual Proof:

Problem Set 4-6L

1. Given the diagram, prove $\triangle MNK \cong \triangle KLM$ using

A) SAS \cong SAS with included $\angle N$ & $\angle L$



B) SAS \cong SAS with included $\angle NKM$ & $\angle LMK$

