**Geometry Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Congruent Triangles Block:\_\_\_\_\_\_\_\_\_**

**Be sure to show all of your work. Unjustified Responses will not receive full credit.**

1) Given the figure,

1

2

(a) Find x = \_\_\_\_\_\_\_\_\_

(b) Find = \_\_\_\_\_\_\_

Find = \_\_\_\_\_\_\_

2) Find the values of the each numbered angle.

9

1

4

3

8

7

6

5

2

=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

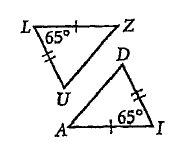
=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

=\_\_\_\_\_\_\_

4) Identify if the pair of triangles drawn can be determined congruent by SSS, SAS, ASA, or AAS. If cannot be determined, explain why.

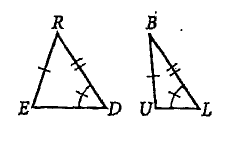


Can you determine congruent triangles? : Yes or No  
**If yes**, write the congruence statement: \_\_\_\_\_\_\_\_\_\_

**If yes**, What postulate or theorem was used?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**If no**, explain why not: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

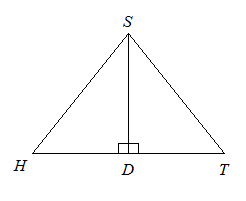


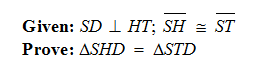
Can you determine congruent triangles? : Yes or No  
**If yes**, write the congruence statement: \_\_\_\_\_\_\_\_\_\_

**If yes**, What postulate or theorem was used?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**If no**, explain why not: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 For the following problems, write a formal proof.

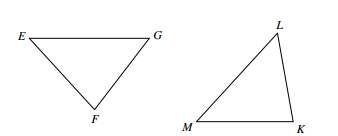
5) 



6) Given: and

Prove: 

7) List all congruent sides and angles of the triangle



8) Find the missing values

B

6k

n-3

C

D

x+2

E

9

m

12

z - 4

3y

7

F

A

k = \_\_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_

m = \_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_

n = \_\_\_\_\_\_\_\_ z = \_\_\_\_\_\_\_\_