|  |  |
| --- | --- |
| **TERM:** | **DEFINITION:** |
| **Congruent Triangles** | **Triangles in which corresponding angles and sides are congruent.** |

**Corresponding Parts of Congruent Triangles are Congruent or CPCTC**

**EXAMPLE 1 If CAT DOG, list all of the congruencies:**

### C

### A

T

D

O

G

**Angles: Sides:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

How many congruencies does it take for us to show that two triangles are congruent?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How many additional congruencies could we deduce?\_\_\_\_\_\_\_\_\_\_\_\_\_

**EXAMPLE 2**

Will require you to go one step further

S

R

Z

1

2

3

4

### T

Given: RZ bisects ∠TRS

∠3 ≅ ∠4

Prove: ∠S ≅ ∠T

|  |  |
| --- | --- |
| STATEMENTS | REASONS |
|  |  |
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|  |  |
|  |  |

## B

A

D

C

M

**EXAMPLE 3**

Given: AB bisects CD

∠C ≅ ∠D

Prove: ∠A ≅ ∠B

|  |  |
| --- | --- |
| STATEMENTS | REASONS |
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**EXAMPLE 4**

## B

A

## M

1

2

3

4

C

D

Given: M is the midpoint of AB

∠1 ≅ ∠2, ∠3 ≅ ∠4

Prove: AC ≅ BD

|  |  |
| --- | --- |
| STATEMENTS | REASONS |
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