Geometry

4.6 Use Congruent Triangles

# Definition of Congruent Triangles

corresponding parts have to be congruent

* By the definition of congruent triangles, we know that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## CPCTC

ongruent

riangles

ongruent

arts

orresponding

C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ P\_\_\_\_\_\_\_\_\_ of C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ T\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are C\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* To show that parts of triangles are congruent

triangles are congruent using

* + First show that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

HL

AAS

ASA

SAS

SSS

* + - \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_

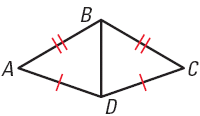
Corresponding

* + Second say that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_parts are congruent using

“def ≅ Δ”

CPCTC

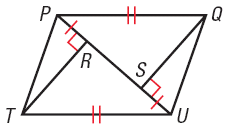
* + - \_\_\_\_\_\_\_\_\_or \_\_\_\_\_\_\_\_\_

Write a plan for a proof to show that ∠A ≅ ∠C

Show that by reflexive

Show that triangles are ≅ by SSS

Say ∠A ≅ ∠C by def ≅ Δ or CPCTC

Given: , , ,

Prove: ΔPTU =̃ ΔUQP

, , , (given)

∠TRU and ∠PSQ are rt ∠s (def ⊥ lines)

ΔTRU and ΔPSQ are rt Δs (def rt. Δ)

PR = US (def =̃)

PS = PR + RS, UR = US + RS (seg add post)

UR = PR + RS (substitution)

PS = UR (substitution)

(def =̃)

ΔRTU =̃ ΔSPQ (HL)

∠TUP =̃ ∠QPU (CPCTC)

(reflexive)

ΔPTU =̃ ΔUQP (SAS)

Assignment: 259 #2-10 even, 14-28 even, 34, 38, 41-46 all = 21 total

Extra Credit: 263 #2, 4 = +2