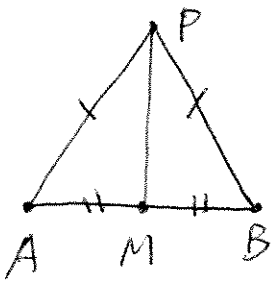
Math 372 Quiz 4 Total points: 10
Instructor: Yi Wang

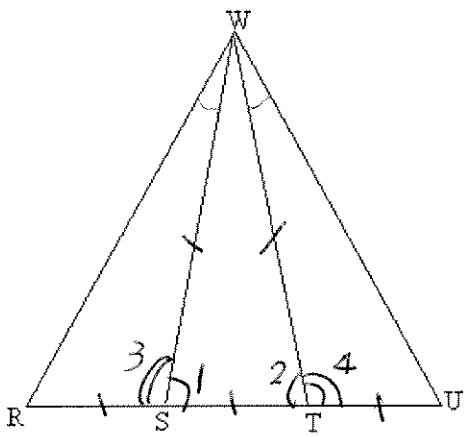
Name(Print)_____ Section_____ Grade_____

1. (5 points) Prove the statement: If $PA = PB$ and M is the midpoint of segment $\overline{AB}$, then line $\overline{PM}$ bisects $\angle APB$.



$AM = MB$	M is the midpoint of AB
$\triangle APM \cong \triangle BPM$	SSS
$\angle APM \cong \angle BPM$	CPCF
i.e., $\overline{PM}$ bisects $\angle APB$ ☑	

2. (5 points) If $WS = WT$ and $RS = ST = TU$, with $R - S - T - U$, prove that $\angle RWS \cong \angle TWU$.



Conclusions	Justification
$m\angle 1 = m\angle 2$	WS=WT and the isosceles triangle thm.
$m\angle 3 = 180^\circ - m\angle 1$	$\angle 1$ and $\angle 3$ are a linear pair.
$m\angle 4 = 180^\circ - m\angle 2$	$\angle 2$ and $\angle 4$ are a linear pair.
$m\angle 3 = m\angle 4$	algebra.
$\triangle RSW \cong \triangle UTW$	SAS
$\angle RWS \cong \angle TWU$	CPCF ☑

1