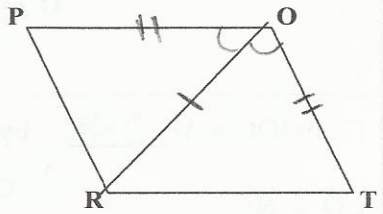
**Geometry**
**Worksheet-Congruent Triangles III**

**Name** KEY
**Date**_____ **Period**_____

Label the drawing with the given information and state why the triangles are congruent. Use all eight theorems (SSS, SAS, ASA, AAS, HA, HL, LL, LA)

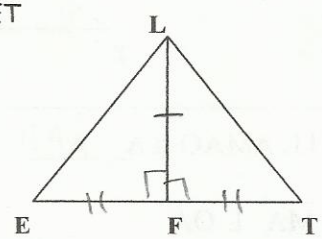
1. $\Delta POR \cong \Delta$ TOR by SAS

$\angle POR \cong \angle TOR$
$\overline{PO} \cong \overline{TO}$



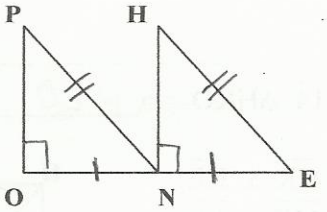

2. $\Delta LFE \cong \Delta$ LFT by LL or SAS

$\overline{LF}$ is the $\perp$ bisector of $\overline{ET}$



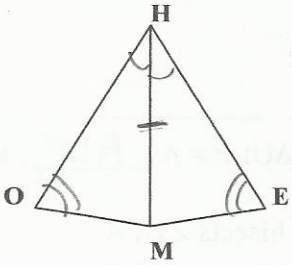

3. $\Delta PNO \cong \Delta$ HEN by HL

N is the midpoint of $\overline{OE}$
$\overline{PN} \cong \overline{HE}$
$\overline{PO} \perp \overline{ON}$
$\overline{HN} \perp \overline{NE}$



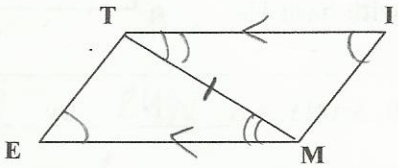

4. $\Delta HOM \cong \Delta$ HEM by AAS

$\overline{HM}$ bisects $\angle OHE$
$\angle O \cong \angle E$



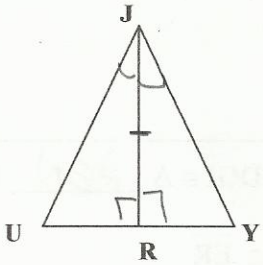

5. $\Delta MIT \cong \Delta$ TEM by AAS

$\angle I \cong \angle E$
$\overline{TI} \parallel \overline{ME}$



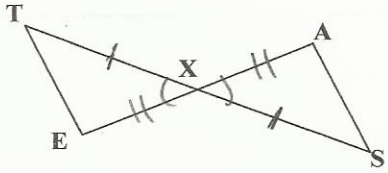

6. $\Delta RUJ \cong \Delta$ RYJ by LA or ASA

$\overline{JR} \perp \overline{UY}$
$\overline{JR}$ bisects $\angle UJY$



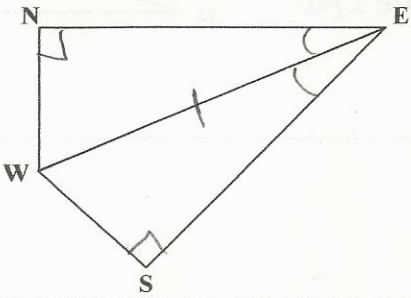

7. $\Delta XTE \cong \Delta$ XSA by SAS

X is the midpoint of both $\overline{TS}$ and $\overline{AE}$



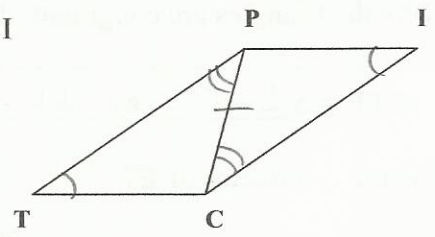

8. $\Delta NEW \cong \Delta$ SEW by HA or AAS

$\overline{NW} \perp \overline{NE}$
$\overline{SW} \perp \overline{SE}$
$\angle NEW \cong \angle SEW$



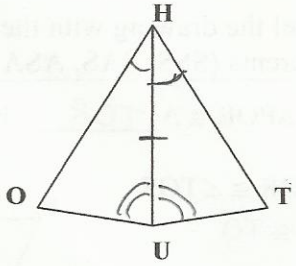
9. $\Delta PTC \cong \Delta$ CIP by AAS

$\angle T \cong \angle I$
$\angle TPC \cong \angle PCI$



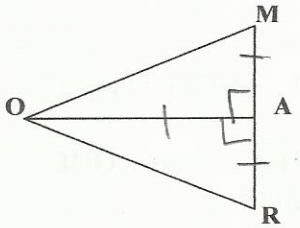

10. $\Delta TUH \cong \Delta$ OUH by ASA

$\overline{HU}$ bisects $\angle OHT$
$\overline{UH}$ bisects $\angle OUT$



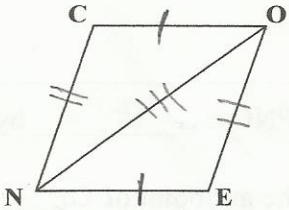

11. $\Delta MAO \cong \Delta$ RAO by LL or SAS

$\overline{MA} \perp \overline{OA}$
A is the midpoint of $\overline{MR}$



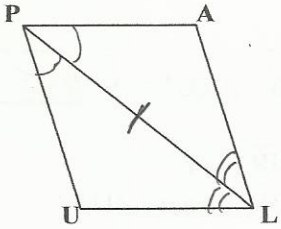

12. $\Delta NOC \cong \Delta$ ONE by SSS

$\overline{CO} \cong \overline{NE}$
$\overline{CN} \cong \overline{OE}$



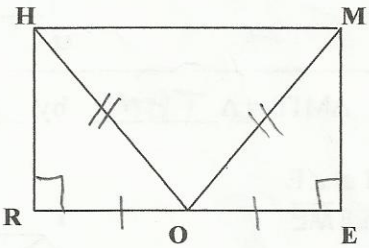

13. $\Delta ULP \cong \Delta$ ALP by ASA

$\overline{PL}$ bisects $\angle UPA$
$\overline{LP}$ bisects $\angle ALU$



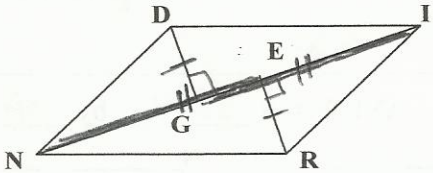

14. $\Delta HRO \cong \Delta$ MEO by HL

$\overline{HR} \perp \overline{RE}$
$\overline{ME} \perp \overline{ER}$
O is the midpoint of $\overline{RE}$
$\Delta HMO$ is isos. with base $\overline{HM}$




15. $\Delta DGI \cong \Delta$ REN by LL or SAS

$\overline{DG} \cong \overline{ER}$
$\overline{NE} \cong \overline{IG}$
$\overline{DG} \perp \overline{NI}$
$\overline{RE} \perp \overline{NI}$




16. $\Delta ANY \cong \Delta$ KNS by HA or AAS

$\overline{YA} \perp \overline{AK}$
$\overline{SK} \perp \overline{KA}$
N is the midpoint of $\overline{YS}$