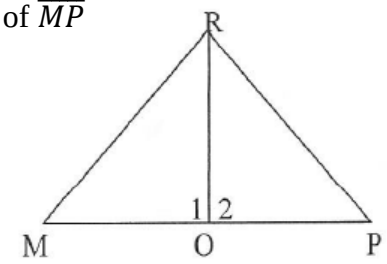
Name: Date: Period:

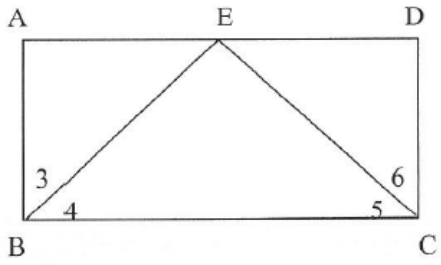
HW #5-13: Test Review Worksheet

1. **Given**: $\overline{RO}$ is the ⊥ bisector of $\overline{MP}$
   Prove: $\Delta MRO \cong \Delta PRO$



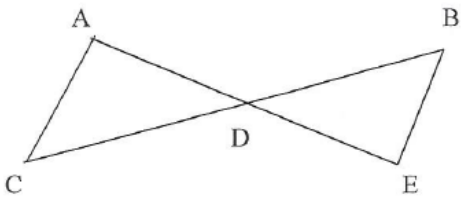
Statements	Reasons
$\overline{RO}$ is the ⊥ bisector of $\overline{MP}$	Given
$\angle 1$ and $\angle 2$ are right angles $\overline{MO} \cong \overline{PO}$	Def. of a ⊥ bisector
$\overline{RO} \cong \overline{RO}$	Reflex. Prop. ≅
$\angle 1 \cong \angle 2$	All right angles are congruent
$\Delta MRO \cong \Delta PRO$	SAS ≅

2. **Given**: $\angle 3 \cong \angle 6$, $\angle 3$ comp $\angle 4$, $\angle 5$ comp $\angle 6$
   Prove: ΔEBC is isosceles



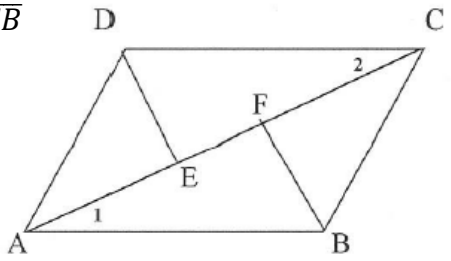
Statements	Reasons
$\angle 3 \cong \angle 6$, $\angle 3$ comp $\angle 4$, $\angle 5$ comp $\angle 6$	Given
$\angle 4 \cong \angle 5$	≅ comps. thm.
$\overline{BE} \cong \overline{CE}$	Comverse of the Base Angles Thm.
ΔEBC is isosceles	Def. of an isosceles triangle

3. **Given**: $\overline{CD} \cong \overline{BD}$ and $\overline{AC} \parallel \overline{EB}$
   Prove: $\Delta ACD \cong \Delta EBD$



Statements	Reasons
$\overline{CD} \cong \overline{BD}$ and $\overline{AC} \parallel \overline{EB}$	Given
$\angle ADC \cong \angle EDB$	Vertical angles are congruent
$\angle C \cong \angle B$ ($\angle A \cong \angle E$)	$\parallel \rightarrow$ alt. int. angle are congruent
$\Delta ACD \cong \Delta EBD$	ASA≅ (AAS≅)

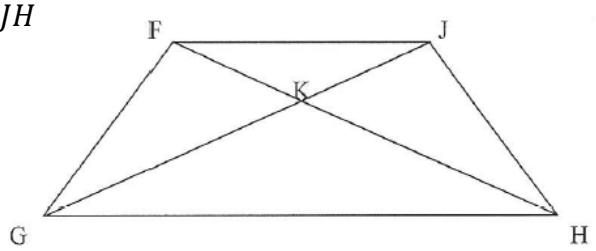
4. **Given**: $\overline{AE} \cong \overline{FC}$, $\overline{FB} \cong \overline{DE}$ and $\overline{DE} \parallel \overline{FB}$
   Prove: $\angle 1 \cong \angle 2$



Proof for #4:

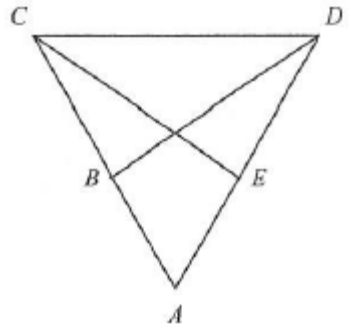
Statements	Reasons
$\overline{AE} \cong \overline{FC}$, $\overline{FB} \cong \overline{DE}$ and $\overline{DE} \parallel \overline{FB}$	**Given**
$\angle DEF \cong \angle BFE$	$\parallel \rightarrow$ alt. int. angle are congruent
AE = FC	$\cong \rightarrow =$
AE + EF = AF CF + EF = CE	Segment Addition Postulate
AE + EF = CE	Substitution Prop. =
AF = CE	Substitution Prop. =
$\overline{AF} \cong \overline{CE}$	$= \rightarrow \cong$
$\Delta DEC \cong \Delta BFA$	SAS$\cong$
$\angle 1 \cong \angle 2$	CPCTC

5. **Given**: $\overline{FG} \cong \overline{JH}$ and $\angle KFG \cong \angle KJH$
   Prove: ΔFKJ is isosceles



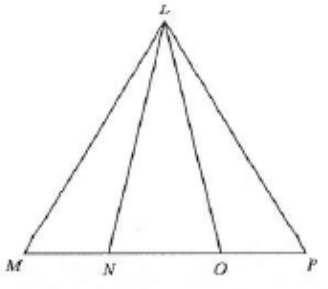
Statements	Reasons
$\overline{FG} \cong \overline{JH}$ and $\angle KFG \cong \angle KJH$	Given
$\angle FKG \cong \angle JKH$	Vertical Angles are congruent
$\Delta FKG \cong \Delta JKH$	AAS$\cong$
$\overline{FK} \cong \overline{JK}$	CPCTC
ΔFKJ is isosceles	Def. of an isosceles triangle

6. **Given**: $\overline{BD} \perp \overline{CB}$, $\overline{CE} \perp \overline{ED}$ and $\overline{CB} \cong \overline{DE}$
   Prove: $\Delta BCD \cong \Delta EDC$



Statements	Reasons
$\overline{BD} \perp \overline{CB}$, $\overline{CE} \perp \overline{ED}$ and $\overline{CB} \cong \overline{DE}$	Given
$\angle CBD$ and $\angle DEC$ are right angles	Def. of $\perp$ lines
ΔCBD and ΔDEC are right triangles	Def. of a right triangle
$\overline{CD} \cong \overline{CD}$	Reflex. Prop. $\cong$
$\Delta BCD \cong \Delta EDC$	HL$\cong$

7. **Given:** $\angle MLN \cong \angle PLO$, $\angle MNL \cong \angle POL$ and $\overline{MO} \cong \overline{NP}$
   Prove: ΔMLP is isosceles



Statements	Reasons
$\angle MLN \cong \angle PLO$, $\angle MNL \cong \angle POL$ and $\overline{MO} \cong \overline{NP}$	**Given**
$\angle M \cong \angle P$	**Third Angles Theorem**
$\overline{ML} \cong \overline{PL}$	**Converse of the Base Angles Theorem**
ΔMLP is isosceles	**Def. of an isosceles triangle**