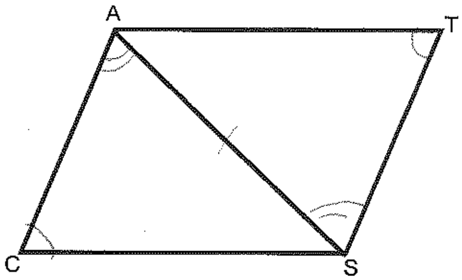
Independent Practice

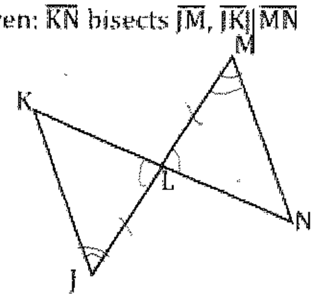
Given: $\overline{CA} \parallel \overline{TS}$, $\angle C = \angle T$

Prove: $\triangle ACS \cong \triangle STA$



Statement	Reason
① $\angle C \cong \angle T$, $\overline{CA} \parallel \overline{TS}$	① given
② $\angle CAS \cong \angle TSA$	② Alt int ∠'s are ≅
③ $\overline{AS} \cong \overline{AS}$	③ Reflexive Property
④ $\triangle ACS \cong \triangle STA$	④ AAS ≅

Given: $\overline{KN}$ bisects $\overline{JM}$, $\overline{JK} \parallel \overline{MN}$

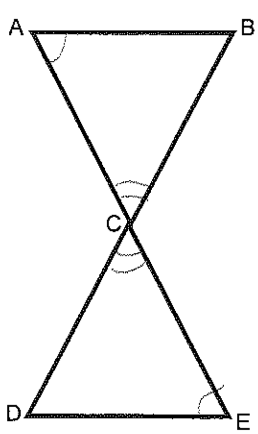


Prove: $\triangle JKL \cong \triangle MNL$

Statement	Reason
① $\overline{KN}$ bisects $\overline{JM}$	① given
② $\overline{JK} \parallel \overline{MN}$	② given
③ $\angle J \cong \angle M$	③ Alt. Int. ∠'s ≅ when lines ∥
④ $\triangle JKL \cong \triangle MNL$	④ ASA ≅

Given: $\overline{AB} \parallel \overline{DE}$

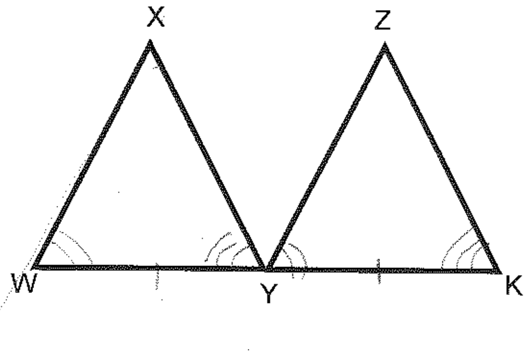
Prove: $\triangle ABC \sim \triangle EDC$



Statement	Reason
① $\overline{AB} \parallel \overline{DE}$	① given
② $\angle A \cong \angle E$	② Alt. Int ∠'s are ≅
③ $\angle ACB \cong \angle ECD$	③ Vertical ∠'s are ≅
④ $\triangle ABC \sim \triangle EDC$	④ AA ~

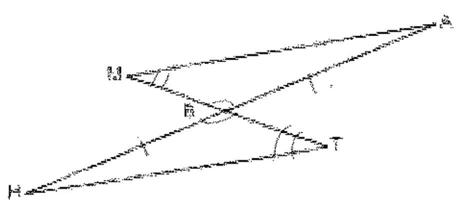
Given: $\overline{WX} \parallel \overline{ZY}$, $\angle WYX \cong \angle ZYK$, and Y is the midpoint of $\overline{WK}$

Prove: $\angle WXY \cong \angle YZK$



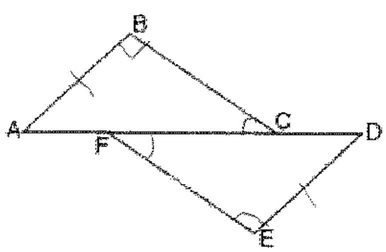
Statement	Reason
1) $\overline{WX} \parallel \overline{ZY}$	1) given
2) $\angle WYX \cong \angle ZKY$	2) given
3) Y is midpoint	3) given
4) $WY \cong YK$	4) def of midpoint
5) $\angle XWY \cong \angle ZYK$	5) corr ∠'s are ≅
6) $\triangle WXY \cong \triangle YZK$	6) ASA ≅
7) $\angle WXY \cong \angle YZK$	7) CPCTC

Given: $\overline{MT}$ and $\overline{HA}$ intersect at B, $\overline{MA} \parallel \overline{HT}$, and $\overline{MT}$ bisects $\overline{HA}$.



Prove: $\overline{MA} \cong \overline{HT}$

Statement	Reason
1) $MA \parallel HT$	1) given
2) $\overline{MT}$ bisects $\overline{HA}$	2) given
3) $\angle MBA \cong \angle HBT$	3) vert. ∠s ≅
4) $HB \cong BA$	4) segment bisector divides a line in 2 ≅ parts
5) $\angle M \cong \angle T$	5) Alt int. ∠s ≅ when lines ∥
6) $\triangle MBA \cong \triangle HBT$	6) AAS ≅
7) $MA \cong HT$	7) CPCTC



Given: $\overline{AFCD}$, $\overline{AB} \perp \overline{BC}$, $\overline{DE} \perp \overline{EF}$, $\overline{BC} \parallel \overline{FE}$, $\overline{AB} \cong \overline{DE}$

Prove: $\overline{AC} \cong \overline{FD}$

Statements	Reasons
1 $\overline{AFCD}$	1 Given
2 $\overline{AB} \perp \overline{BC}$, $\overline{DE} \perp \overline{EF}$	2 Given
3 $\angle B$ and $\angle E$ are right angles.	3 def. of ⊥ lines
4 $\angle B \cong \angle E$	4 All right angles are congruent.
5 $\overline{BC} \parallel \overline{FE}$	5 Given
6 $\angle BCA \cong \angle EFD$	6 Alt. int ∠s are ≅
7 $\overline{AB} \cong \overline{DE}$	7 Given
8 $\triangle ABC \cong \triangle DEF$	8 AAS
9 $\overline{AC} \cong \overline{FD}$	9 CPCTC