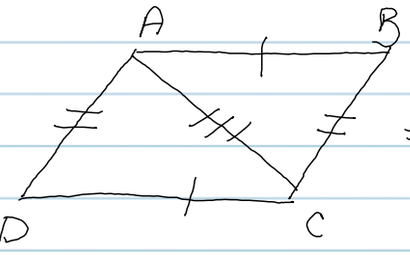
Ashley Keenar 12/22/10

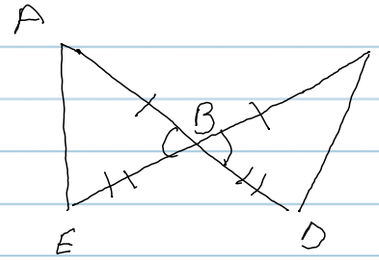
Geometry B3

#1 Given: $\overline{AB} \cong \overline{CD}$
$\overline{BC} \cong \overline{DA}$
Prove: $\triangle ABC \cong \triangle CDA$



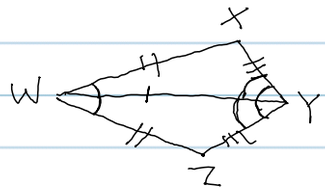
Statement	Reasons
$\overline{AB} \cong \overline{CD}$	given
$\overline{BC} \cong \overline{DA}$	
$\overline{AC} \cong \overline{AC}$	Reflexive
$\triangle ABC \cong \triangle CDA$	SSS

#2 Given $\overline{AB} \cong \overline{CB}$
$\overline{EB} \cong \overline{DB}$
Prove: $\triangle ABE \cong \triangle CBD$



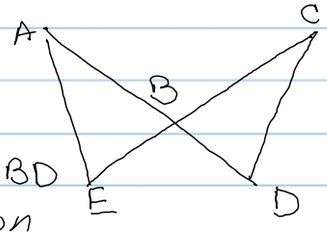
Statement	Reasons
$\overline{AB} \cong \overline{CB}$	given
$\overline{EB} \cong \overline{DB}$	
$\angle ABE \cong \angle CBD$	vertical angles
$\triangle ABE \cong \triangle CBD$	ASA

#3 Given: $\angle XWY \cong \angle ZWY$
$\angle XYW \cong \angle ZYW$
Prove: $\triangle WXY \cong \triangle WZY$



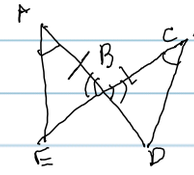
statement	Reason
$\angle XWY \cong \angle ZWY$	given
$\angle XYW \cong \angle ZYW$	
$\overline{WY} \cong \overline{WY}$	Reflexive
$\triangle WXY \cong \triangle WZY$	ASA

#4 Given: $\overline{AB} \cong \overline{CB}$
$\overline{EB} \cong \overline{DB}$
Prove: $\triangle ABE \cong \triangle CBD$



Statement	Reason
$\overline{AB} \cong \overline{CB}$	given
$\overline{EB} \cong \overline{DB}$	
$\angle A \cong \angle C$	Vertical $\angle \cong$
$\triangle ABE \cong \triangle CBD$	ASA

#5 given: $\angle A \cong \angle C$, $\overline{AB} \cong \overline{CB}$ S
prove: $\triangle ABE \cong \triangle CBD$ R



$\angle A \cong \angle C$; $\overline{AB} \cong \overline{CB}$	given
$\angle ABE \cong \angle CBD$	Vertical $\angle \cong$
$\triangle ABE \cong \triangle CBD$	~~ASA~~ SAS

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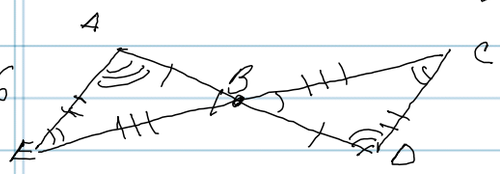
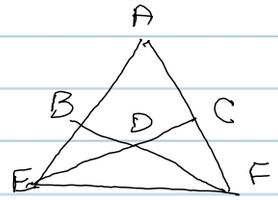
#6



Given: $\overline{AD}$ bisects $\overline{EC}$
$\overline{EC}$ bisects $\overline{AD}$
Prove: $\triangle ABE \cong \triangle DBC$

Statement	Reason
$\overline{AD}$ bisects $\overline{EC}$	given
$\overline{EC}$ bisects $\overline{AD}$	
$\overline{AB} \cong \overline{DB}$	Def of segments
$\overline{EB} \cong \overline{CB}$	
$\angle CBD \cong \angle EBA$	Vertical angle
$\triangle ABE \cong \triangle DBC$	SAS

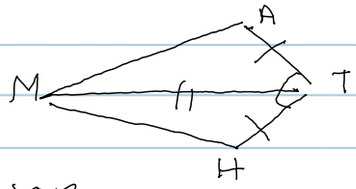
#17 Given: $\overline{AC} \cong \overline{AB}$
$\overline{AE} \cong \overline{AF}$



Prove: $\triangle ACE \cong \triangle ABF$

Statement	Reason
$\overline{AC} \cong \overline{AB}$, $\overline{AE} \cong \overline{AF}$	given
$\angle A \cong \angle A$	reflexive
$\triangle ACE \cong \triangle ABF$	SAS

#10 Given: $\overline{AT} \cong \overline{HT}$
$\angle ATM \cong \angle HTM$

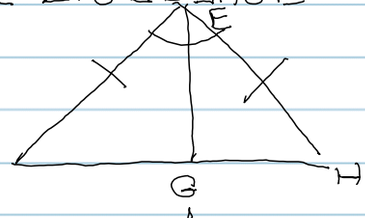


Prove: $\triangle MAT \cong \triangle MHT$

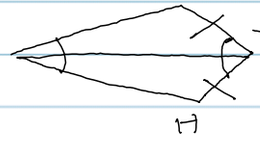
Statement	Reason
$\overline{AT} \cong \overline{HT}$	given
$\angle ATM \cong \angle HTM$	
$\overline{MT} \cong \overline{MT}$	reflexive
$\triangle MAT \cong \triangle MHT$	SAS

#16 Given: $\overline{EG}$ bisects $\angle FEH$
$\overline{EF} \cong \overline{EH}$

Prove $\triangle FGE \cong \triangle HGE$



#11 Given: $\overline{MT}$ bisects $\angle AMH$
$\overline{MT}$ bisects $\angle ATH$



Prove $\triangle MAT \cong \triangle MHT$

Statement	Reason
$\overline{MT}$ bisects $\angle AMH$	given
$\overline{MT}$ bisects $\angle ATH$	
$\angle AMT \cong \angle HMT$	def of $\angle$ bisect
$\angle ATM \cong \angle ATM$	def of $\angle$ bisect
$\overline{MT} \cong \overline{MT}$	reflexive
$\triangle MAT \cong \triangle MHT$	ASA

Statement	Reasons
$\overline{EG}$ bisects $\angle FEH$	given
$\overline{EF} \cong \overline{EH}$	
$\angle FEG \cong \angle HEG$	def of $\angle$ bisect
$\overline{GH} \cong \overline{GH}$	def mid
$\overline{EG} \cong \overline{GG}$	reflexive
$\triangle FGE \cong \triangle HGE$	SAS