

Name: KEY

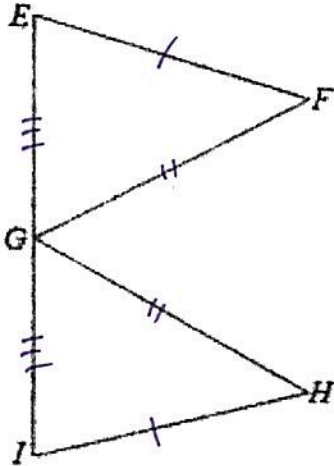
Date: 11-29-16

17) Given:  $G$  is the midpoint of  $\overline{EI}$ ,

$$\overline{EF} \cong \overline{IH}$$

$$\overline{GF} \cong \overline{GH}$$

Prove:  $\angle F \cong \angle H$



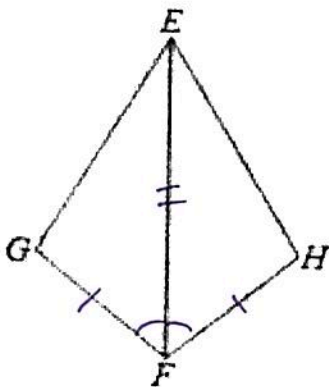
MORE PROOFS PRACTICE! YES!

Statement	Reason
① $\overline{EF} \cong \overline{IH}$	① Given
② $\overline{GF} \cong \overline{GH}$	② Given
③ $G$ is the midpoint of $\overline{EI}$	③ Given
④ $\overline{EG} \cong \overline{IG}$	④ A midpoint divides a segment into two $\cong$ segments
⑤ $\triangle FEG \cong \triangle HIG$	⑤ SSS $\cong$ SSS
⑥ $\angle F \cong \angle H$	⑥ CPCTC

18) Given:  $\overline{EF}$  bisects  $\angle GFH$ ,

$$\overline{GF} \cong \overline{FH}$$

Prove:  $\angle G \cong \angle H$



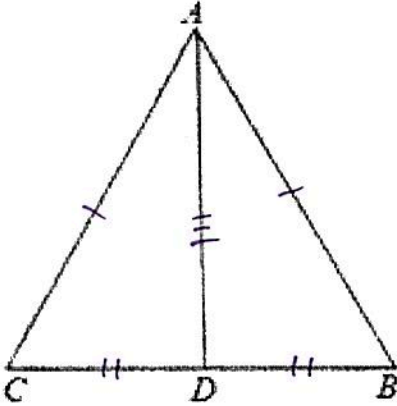
Statement	Reason
① $\overline{GF} \cong \overline{FH}$	① Given
② $\overline{EF}$ bisects $\angle GFH$	② Given
③ $\angle GFE \cong \angle HFE$	③ An angle bisector divides an angle into two $\cong$ angles
④ $\overline{EF} \cong \overline{EF}$	④ Reflexive Property
⑤ <del><math>\triangle GFE \cong \triangle HFE</math></del> $\triangle GFE \cong \triangle HFE$	⑤ SAS $\cong$ SAS
⑥ $\angle G \cong \angle H$	⑥ CPCTC

19) Given:  $\triangle ABC$  is isosceles

with vertex  $A$ ,

$\overline{AD}$  bisects  $\overline{CB}$ .

Prove:  $\angle CAD \cong \angle BAD$

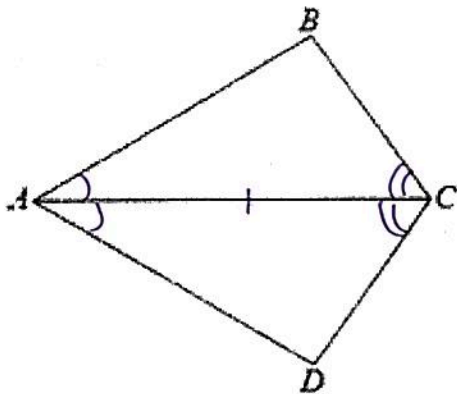


Statement	Reason
① $\triangle ABC$ is isosceles with vertex $A$	① Given
② $\overline{AC} \cong \overline{AB}$	② An isosceles triangle has 2 $\cong$ sides
③ $\overline{AD}$ bisects $\overline{CB}$	③ Given
④ $\overline{CD} \cong \overline{BD}$	④ A segment bisector cuts a segment into 2 $\cong$ segments
⑤ $\overline{AD} \cong \overline{AD}$	⑤ Reflexive Property
⑥ $\triangle ACD \cong \triangle ABD$	⑥ SSS $\cong$ SSS
⑦ $\angle CAD \cong \angle BAD$	⑦ CPCTC

20) Given:  $\angle BAC \cong \angle DAC$ ,

$\angle BCA \cong \angle DCA$

Prove:  $\overline{BC} \cong \overline{DC}$



Statement	Reason
① $\angle BAC \cong \angle DAC$	① Given
② $\angle BCA \cong \angle DCA$	② Given
③ $\overline{AC} \cong \overline{AC}$	③ Reflexive Prop.
④ $\triangle ABC \cong \triangle ADC$	④ ASA $\cong$ ASA
⑤ $\overline{BC} \cong \overline{DC}$	⑤ CPCTC