Work backwards

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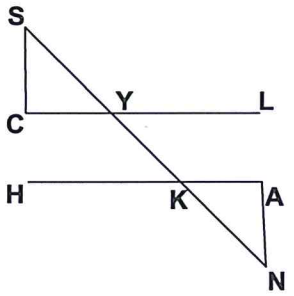
Date _____
Geometry

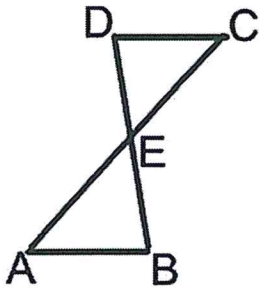
Proving Multiplication Mini Proofs

1. Given: None
Prove: $\overline{SC} \bullet \overline{NK} = \overline{NA} \bullet \overline{SY}$



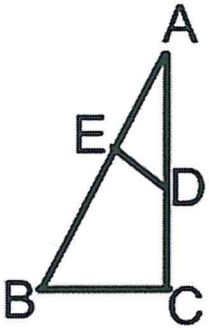
Statements	Reasons
$\triangle SCY \sim \triangle NAK$	AA≅AA
$\frac{SC}{SY} = \frac{NA}{NK}$	CSSTIP
$SC \cdot NK = NA \cdot SY$	cross products are equal

2. Given: None
Prove: $\overline{CD} \bullet \overline{AE} = \overline{AB} \bullet \overline{CE}$



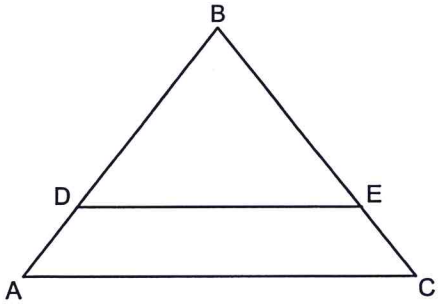
Statements	Reasons
$\triangle DCE \sim \triangle BAE$	AA≅AA
$\frac{CD}{CE} = \frac{AB}{AE}$	CSSTIP
$CD \cdot AE = AB \cdot CE$	cross products are equal

3. Given: None
Prove: $\overline{AC} \bullet \overline{DE} = \overline{AE} \bullet \overline{BC}$



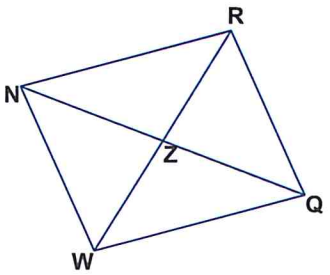
Statements	Reasons
$\triangle ADE \sim \triangle ABC$	AA≅AA
$\frac{AC}{BC} = \frac{AE}{DE}$	CSSTIP
$AC \cdot DE = AE \cdot BC$	cross products are equal

4. Given: None
Prove: $\overline{BE} \bullet \overline{AB} = \overline{DB} \bullet \overline{BC}$



Statements	Reasons
$\triangle BDE \sim \triangle BAC$	AA≅AA
$\frac{BE}{BC} = \frac{DB}{AB}$	CSSTIP
$BE \cdot AB = DB \cdot BC$	cross products are equal

5. Given: None
Prove: $\overline{RZ} \bullet \overline{QW} = \overline{RQ} \bullet \overline{ZW}$

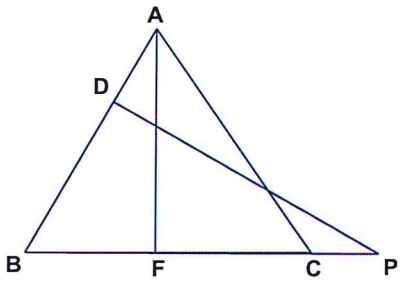


$\triangle RZQ \sim \triangle WZQ$ $AA \cong AA$

$\frac{RZ}{ZW} = \frac{RQ}{QW}$ CSSTIP

$RZ \cdot QW = RQ \cdot ZW$ cross products are equal

6. Given: None
Prove: $\overline{FC} \bullet \overline{PB} = \overline{DB} \bullet \overline{AC}$

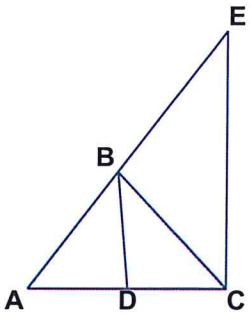


$\triangle FCA \sim \triangle DBP$ $AA \cong AA$

$\frac{FC}{AC} = \frac{DB}{PB}$ CSSTIP

$FC \cdot PB = DB \cdot AC$ cross products are equal

7. Given: None
Prove: $\overline{AD} \bullet \overline{EA} = \overline{BA} \bullet \overline{AC}$

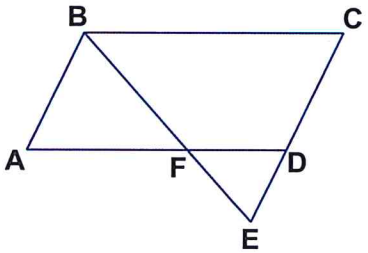


$\triangle ADB \sim \triangle ACE$ $AA \cong AA$

$\frac{AD}{AC} = \frac{BA}{EA}$ CSSTIP

$AD \cdot EA = BA \cdot AC$ cross products are equal

8. Given: None
Prove: $\overline{AB} \bullet \overline{DF} = \overline{AF} \bullet \overline{FE}$



$\triangle ABF \sim \triangle DEF$ $AA \cong AA$

$\frac{AB}{FE} = \frac{AF}{DF}$ CSSTIP

$AB \cdot DF = AF \cdot FE$ Cross Products are equal