

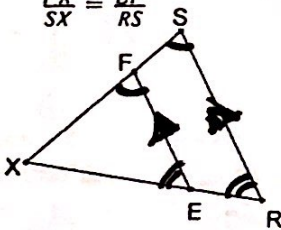
Day 4: Proving Similarity

Complete the following proofs on a separate sheet.

1. Given: $\overline{EF} \parallel \overline{RS}$

Prove: $\triangle FXE \sim \triangle SXR$

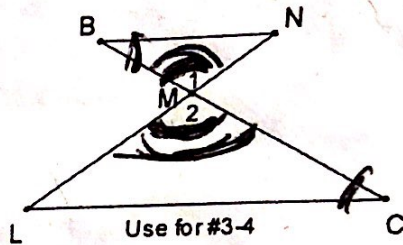
$$\frac{EX}{SX} = \frac{EF}{RS}$$



AA

3. Given: $\angle B \cong \angle C$

Prove: $\triangle BNM \sim \triangle CLM$

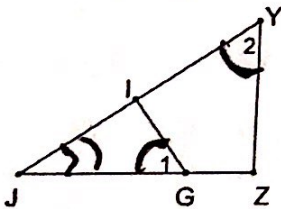


Use for #3-4

2. Given: $\angle 1 \cong \angle 2$

Prove: $\triangle JIG \sim \triangle JZY$

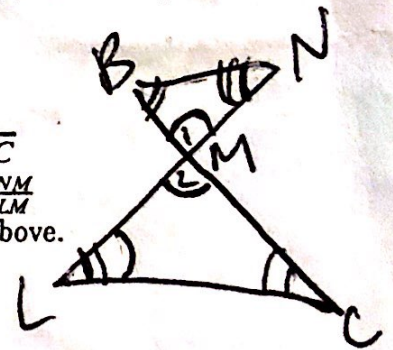
$$\frac{JG}{JY} = \frac{GI}{YZ}$$



4. Given: $\overline{BN} \parallel \overline{LC}$

Prove: $\frac{BM}{CM} = \frac{NM}{LM}$

*Use the image above.



Day 4

Statement	Justification
① $\overline{EF} \parallel \overline{RS}$	Given
② $\angle F \cong \angle S$	Corr \angle s
③ $\angle E \cong \angle R$	Corr \angle s
④ $\triangle FXE \sim \triangle SXR$	AA \sim
⑤ $\frac{FX}{SX} = \frac{EF}{RS}$	def of \sim

Given

$$\overline{EF} \parallel \overline{RS}$$

Corr \angle s

$$\angle F \cong \angle S$$

Corr \angle s

$$\angle E \cong \angle R$$

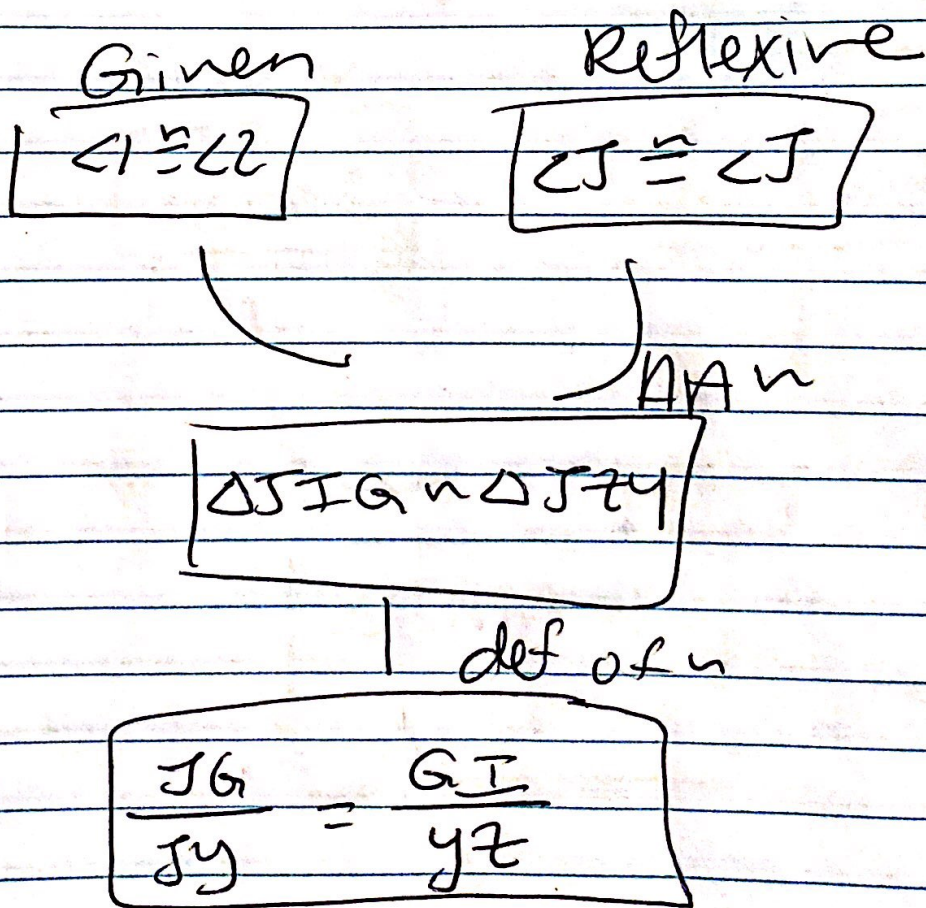
AA \sim

$$\triangle FXE \sim \triangle SXR$$

↓ def of \sim

$$\frac{FX}{SX} = \frac{EF}{RS}$$

②	Statements	Justifications
①	$C_1 \cong C_2$	Given
②	$CJ \cong CJ$	Reflexive
③	$\Delta JIG \cong \Delta JIY$	AA \sphericalangle
④	$\frac{JG}{JY} = \frac{GI}{YZ}$	def of \sphericalangle



③

Statements	Justifications
① $\angle B \cong \angle C$	Given
② $\angle 1 \cong \angle 2$	vertical
③ $\triangle BMN \sim \triangle CML$	AA \sim

Given

$$\angle B \cong \angle C$$

Reflexive Prop

$$\angle 1 \cong \angle 2$$

AA \sim

$$\triangle BMN \sim \triangle CML$$

4

Statements

Justifications

- | | | |
|---|---|---------------|
| ① | $\overline{BN} \parallel \overline{LC}$ | Given |
| ② | $\angle C \cong \angle N$ | Alt Int |
| ③ | $\angle B \cong \angle C$ | Alt Int |
| ④ | $\angle 1 \cong \angle 2$ | Vertical CS |
| ⑤ | $\triangle BMN \sim \triangle CML$ | AAA |
| ⑥ | $\frac{BM}{CM} = \frac{NM}{LM}$ | def of \sim |

