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Geometry

Parallel Definitions

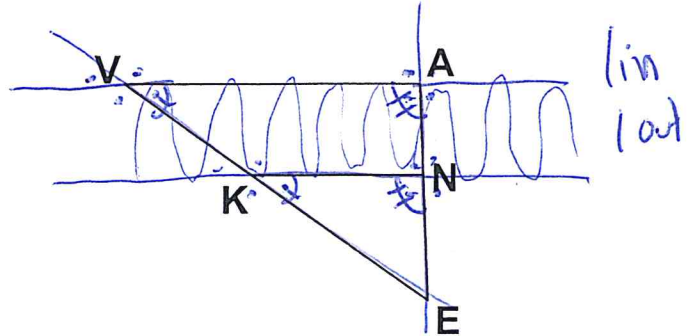
1. Given: $\overline{VA} \parallel \overline{KN}$

Conclusion:

$$\begin{aligned} \angle AVE &\cong \angle NKE \\ \angle VAE &\cong \angle KNE \end{aligned}$$

Reason:

Parallel lines cut by a transversal create congruent corresponding angles



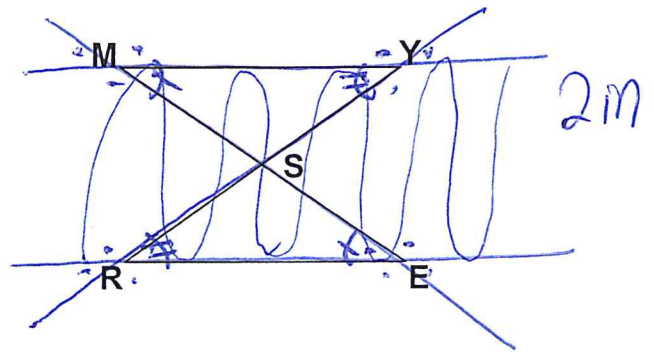
2. Given: $\overline{MY} \parallel \overline{RE}$

Conclusion:

$$\begin{aligned} \angle YME &\cong \angle SER \\ \angle MYE &\cong \angle SER \end{aligned}$$

Reason:

Parallel lines cut by a transversal create congruent alternate interior angles



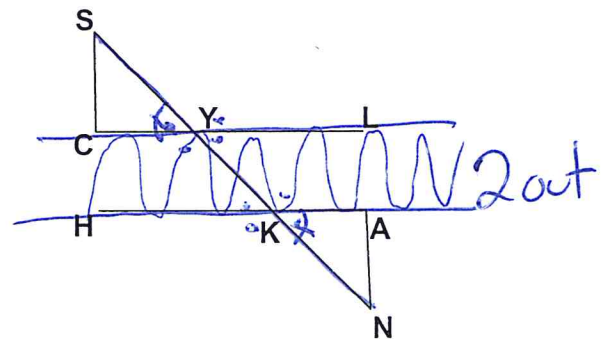
3. Given: $\overline{CL} \parallel \overline{HA}$

Conclusion:

$$\angle SYC \cong \angle AKN$$

Reason:

Parallel lines cut by a transversal create congruent alternate exterior angles.



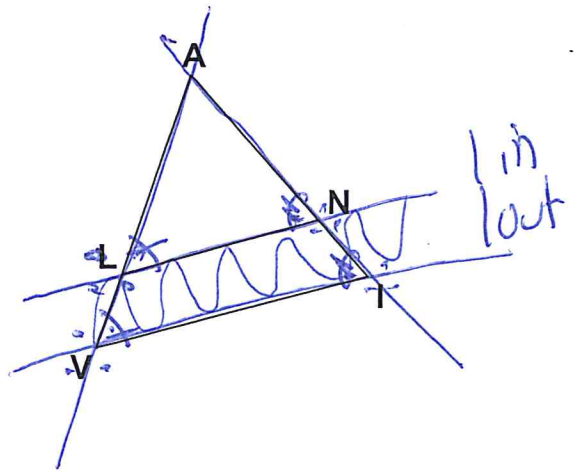
4. Given: $\overline{LN} \parallel \overline{VI}$

Conclusion:

$$\begin{aligned} \angle ALN &\cong \angle AVI \\ \angle ANL &\cong \angle AIV \end{aligned}$$

Reason:

Parallel lines cut by a transversal
create congruent corresponding angles



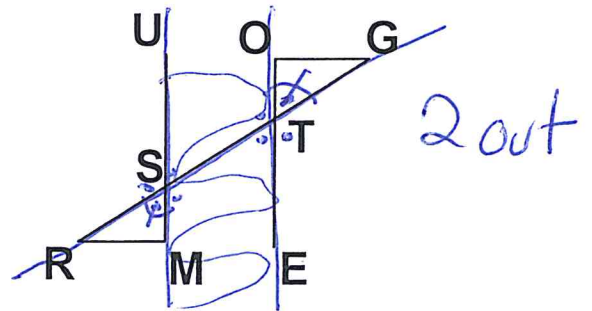
5. Given: $\overline{UM} \parallel \overline{OE}$

Conclusion:

$$\angle GTO \cong \angle RSM$$

Reason:

Parallel lines cut by a transversal
create congruent alternate exterior angles



6. Given: $\overline{SR} \parallel \overline{AB}$

Conclusion:

$$\begin{aligned} \angle BAE &\cong \angle ERS \\ \angle ABE &\cong \angle RSE \end{aligned}$$

Reason:

Parallel lines cut by a transversal
create congruent alternate interior angles.

