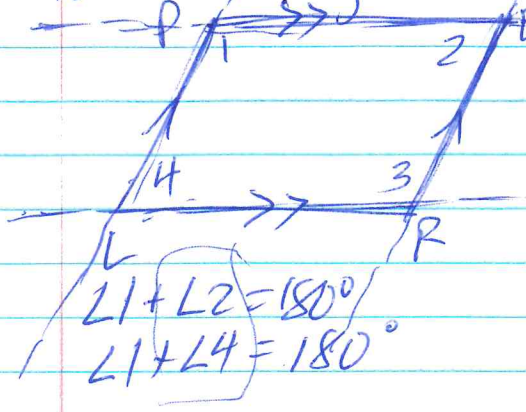
Notes - Parallelogram Properties

C-42 Parallelogram Consecutive Angles



$\angle 1$ & $\angle 2$ are SSIA, so supplementary

$\angle 1$ & $\angle 4$ are SSIA, so "

$\therefore$ Consecutive interior angles of a parallelogram are supplementary.

$\angle 1 + \angle 2 = 180°$

$\angle 1 + \angle 4 = 180°$

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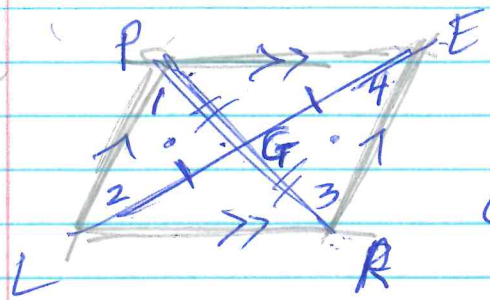

Diagonals of a ~~$\angle$~~ bisect each other

Given: parallelogram PERL with $\overline{PE} \parallel \overline{LR}$ $\overline{PL} \parallel \overline{ER}$ and diagonals $\overline{PR}$ & $\overline{LE}$

Show: G is the midpoint of $\overline{PR}$ and $\overline{LE}$.

What	Why
~~$\overline{PQ} \parallel \overline{RS}$ $\overline{PS} \parallel \overline{RQ}$~~	
$\overline{PE} \parallel \overline{RL}$ $\overline{PL} \parallel \overline{ER}$	Given
$\overline{ER} \cong \overline{PL}$	opp sides of a //ogram are $\cong$
$\angle 1$ & $\angle 3$ are AIA; $\angle 2$ & $\angle 4$ are AIA	definition of AIA
$\angle 1 \cong \angle 3$ $\angle 2 \cong \angle 4$	AIA Postulate
$\triangle PGL \cong \triangle RGE$	ASA
$\overline{PG} \cong \overline{RG}$ $\overline{GL} \cong \overline{GE}$	Corresponding Parts are $\cong$
G is the midpoint of $\overline{PR}$ & $\overline{LE}$	def of midpoint

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$\therefore$ Parallelogram diagonals bisect each other.

~~HW#14. p 278. 3-4, 6-7,~~

HW#14 p 284-5: 1-6, 9, 13-16

write up C-41-44 (use sketches from notes)