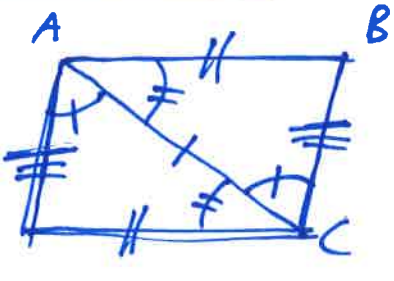
LAUSE 1.34 ⓐ



$$\begin{cases} AB \parallel DC \\ AD \parallel BC \end{cases} \Rightarrow \begin{cases} AB = DC \\ AD = BC \end{cases}$$

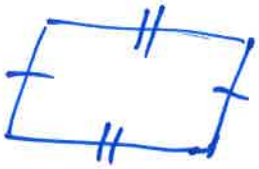
Tod PIIRRÄ AC.

VUOROKULMALAUSE $\Rightarrow \begin{cases} \sphericalangle DAC = \sphericalangle BCA \\ \sphericalangle ACD = \sphericalangle CAB \\ AC = AC \end{cases}$

KSK

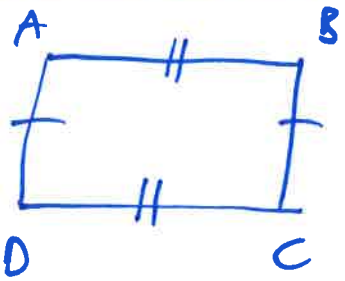
$\Rightarrow \triangle ADC \cong \triangle CBA$

$\Rightarrow \begin{cases} AB = DC \\ AD = BC \end{cases}$.



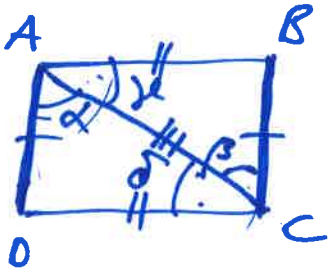
□

LAUSE 1.34 ⓑ



$$\begin{cases} AB = DC \\ AD = BC \end{cases} \Rightarrow \begin{cases} AB \parallel DC \\ AD \parallel BC \end{cases}$$

Tod



PIIRRÄ AC.

SSS $\Rightarrow \triangle ADC \cong CBA$

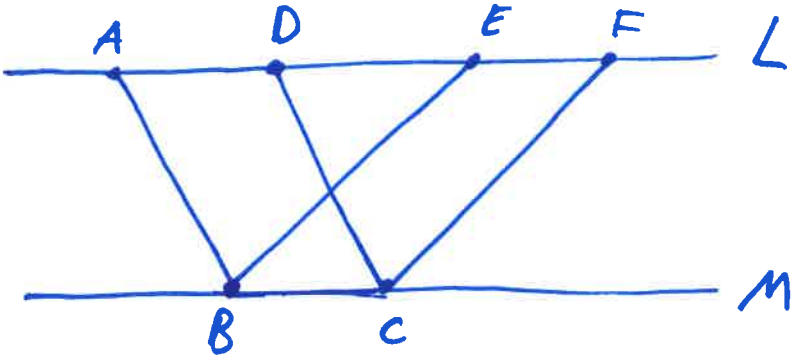
$\Rightarrow \begin{cases} \alpha = \beta \Rightarrow AD \parallel BC \\ \gamma = \delta \Rightarrow AB \parallel DC \end{cases}$

LISÄKSI $\sphericalangle DAB = \sphericalangle BCD$

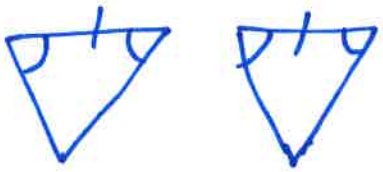
JA $\sphericalangle CDA = \sphericalangle ABC$.

□

LAUSE 1.35



$\begin{cases} ABCD \text{ SUUNNIKKAITA} \\ EBCF \\ AD \subset L, \; EF \subset L \end{cases} \Rightarrow ALA(ABCD) = ALA(EBCF)$



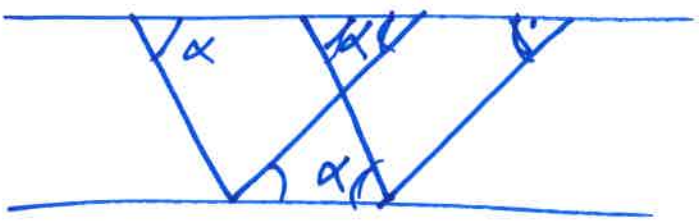
Tod. TODISTETAAN ALUKSI $\triangle ABE \cong \triangle DCF$.

$ABCD$ SUUNNIKAS $\Rightarrow AD = BC$

$EBCF$ SUUNNIKAS $\Rightarrow EF = BC$

$AE = AD + DE = BC + DE = EF + DE = DF$

$\Rightarrow AE = DF$



VUOROKULMALAUSEEN NOJALLA

$\measuredangle BAD = \measuredangle DCB = \measuredangle COF$ JA

VASTAAVASTI $\measuredangle DFC = \measuredangle AEB$.

KSK

$\Rightarrow \triangle AEB \cong \triangle DFC$

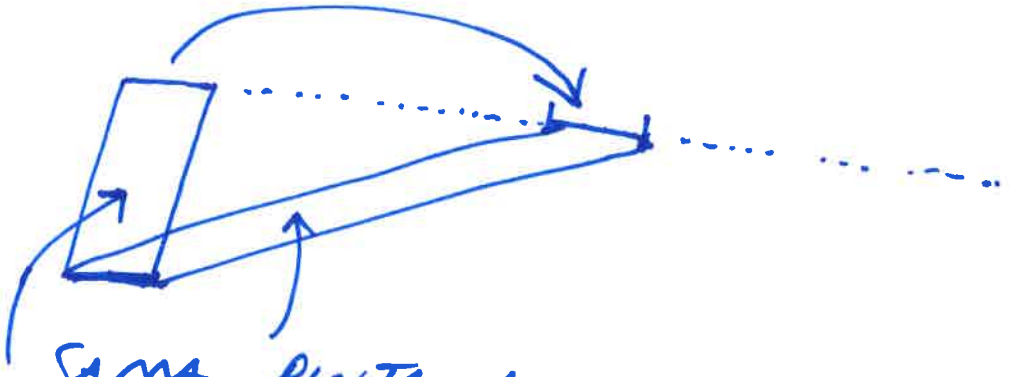
$\Rightarrow ALA(\triangle AEB) = ALA(\triangle DFC)$

SIIS

$$ALA(ABCD) = ALA(AFCB) - ALA(\triangle DFC)$$
$$= ALA(AFCB) - ALA(\triangle AEB)$$
$$= ALA(EBCF).$$

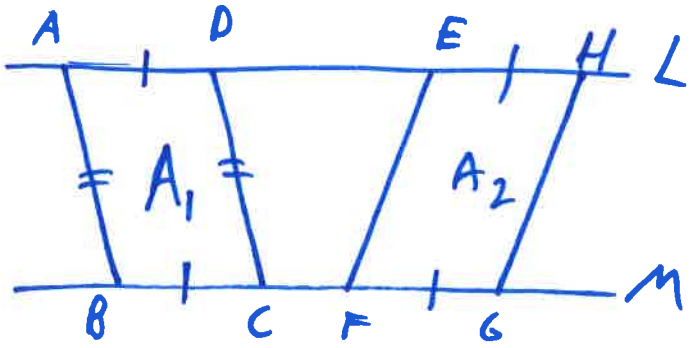
□

SIIS



SAMA PINTA-ALA

LAUSE 1.36

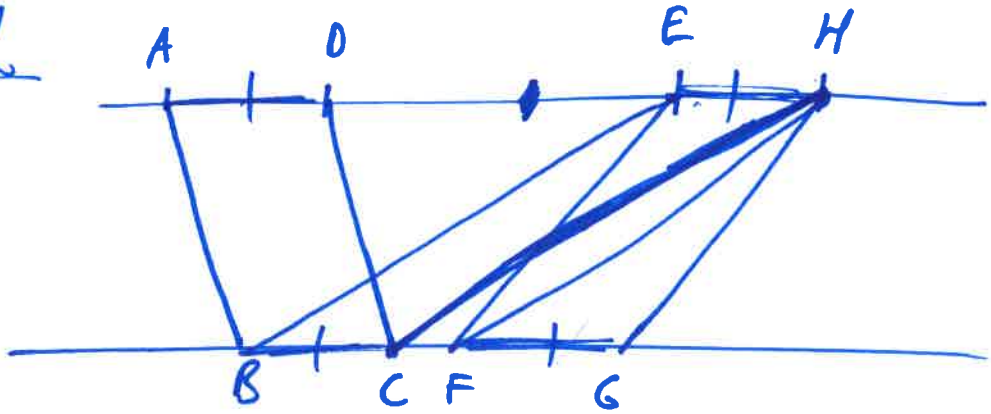


$\left\{\begin{array}{l} ABCD \\ EFGH \end{array}\right.$ SUUNNIKKAISTA

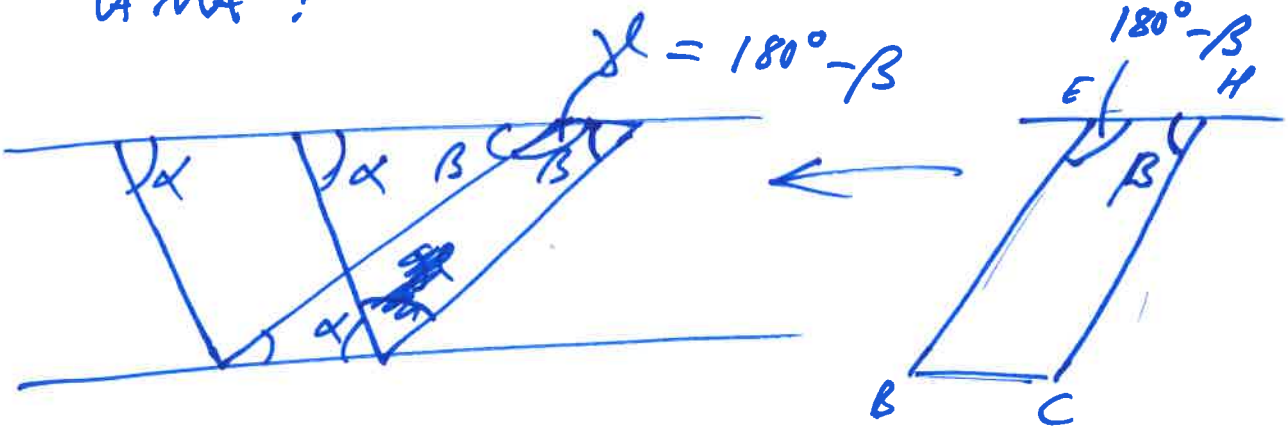
$\Rightarrow A_1 = A_2$

$\left\{\begin{array}{l} AD, EH \subset L \\ BC, FG \subset M \\ AD = EH \end{array}\right.$

Tod.



PIIRRÄ EB JA HC.
OSOITETAAN, ETTÄ EBCH
ON SUUNNIKAS. TILANNE ON
TÄMÄ:

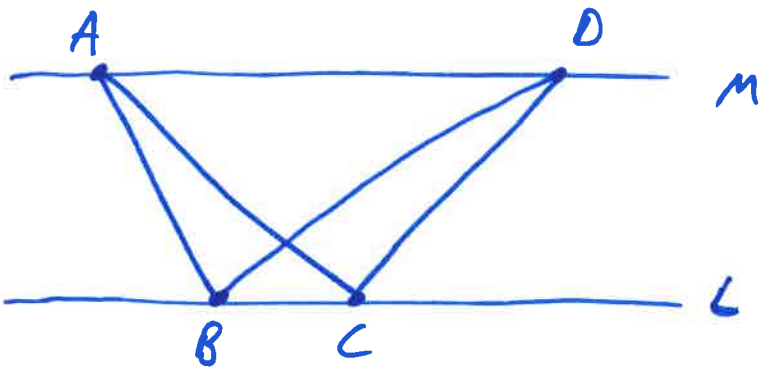


LÄHTÖ-TILANNE $\Rightarrow$ EB ∥ HC, EH ∥ BC $\Rightarrow$ EBCH ON SUUNNIKAS

L. 1.35 L. 1.35

ALA(ABCD) = ALA(EBCH) = ALA(EFGH). □

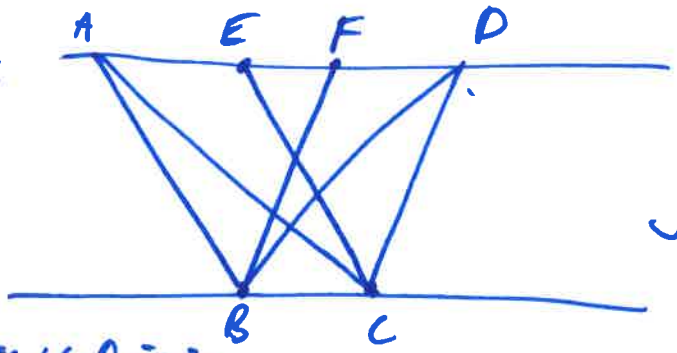
LAUSE 1.37



$L \parallel M$

$\Rightarrow ALA(\triangle ABC) = ALA(\triangle DBC)$

Tod.



PIIRRÄ $EC \parallel AB$ JA $FB \parallel DC$ JOILLE $E,F \in \overleftrightarrow{AD}$.

NÄHDÄÄN, ETTÄ ABCE JA FBCD OVAT SUUNNIKKAITA.

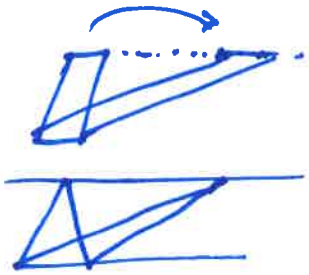
L 1.35

$\Rightarrow$ $ALA(ABCE) = ALA(FBCD)$

$\Rightarrow 2 \cdot ALA(\triangle ABC) = 2 \cdot ALA(\triangle DBC) \;|:2$

$ALA(\triangle ABC) = ALA(\triangle DBC).$ □

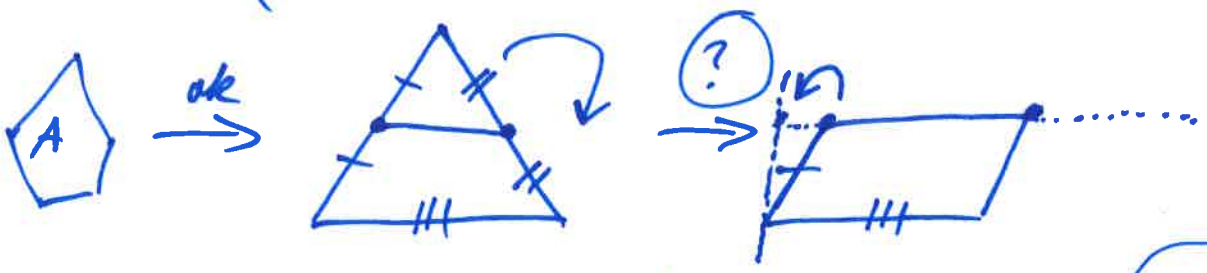
SEURAUS



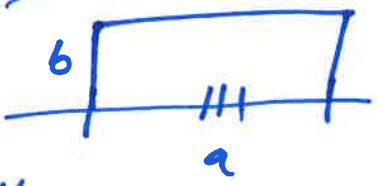
PIIRRÄ $\begin{cases} BF \parallel AC \\ EG \parallel AD \end{cases}$

JA LOPUT VIIVAT.

$\Rightarrow ALA(ABCDE) = ALA(FGA)$



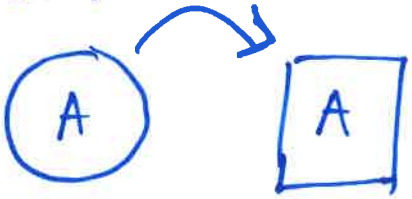
ok



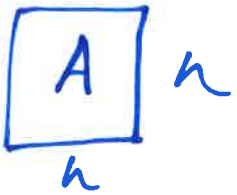
$h = ?$

$ab = h^2$

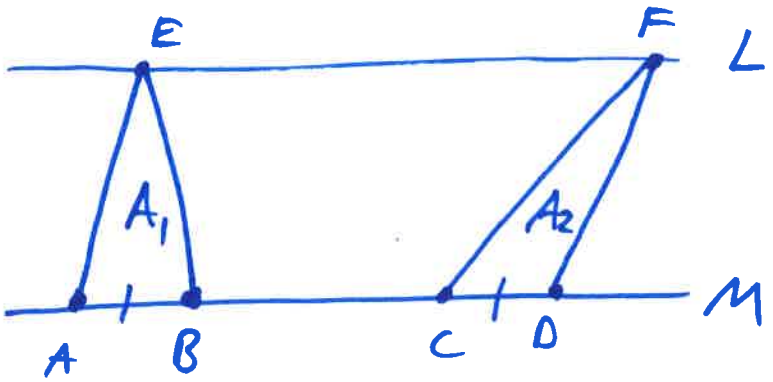
EI MAHD. HARPILLA & VIIVOTTIMELLA



HARJ 4



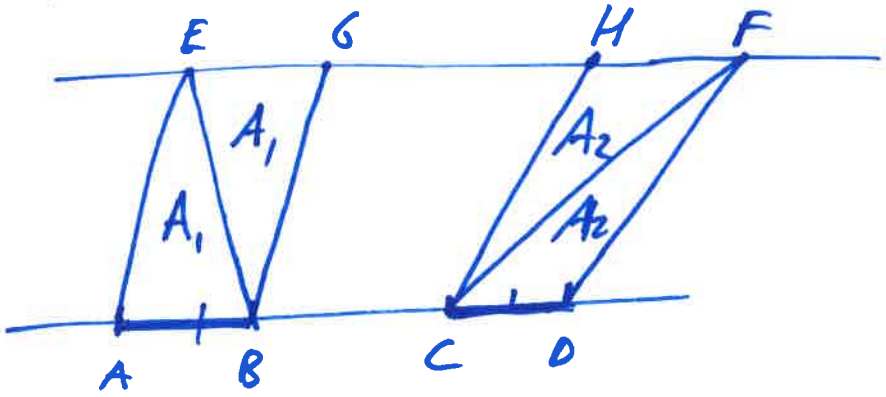
LAUSE 1.38



$L \parallel M$

$\Rightarrow A_1 = A_2$

Tod.



TÄYDENNÄ KOLMIOT SUUNNIKKAIKSI (LISÄÄMÄLLÄ KOLMION VIEREEN YHDEN MUOTOINEN KOPIO).

$\Rightarrow$ ALA $(EABG)$ = ALA $(HCDF)$

$\Rightarrow 2A_1 = 2A_2 \quad /:2$

$A_1 = A_2$