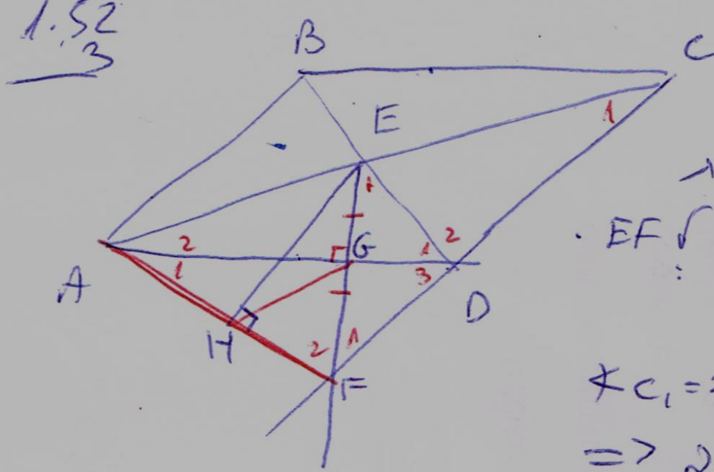
1.52
3



משמעות הלה המטרה
ל AD אנך אמצעי √ EF.

ΔEDC

$\measuredangle C_1 = 30^\circ$ $\quad \measuredangle CED = 90^\circ$

$\Rightarrow 2ED = CD$

(3.5.3) $\triangle EGD \cong \triangle FGD$

⇓

$\measuredangle E_1 = 30^\circ = \measuredangle F_1 \Rightarrow \measuredangle D_3 = 60^\circ$

$\measuredangle CDF = \measuredangle D_1 + \measuredangle D_2 + \measuredangle D_3 = 180^\circ \rightarrow$ C,D,F על ישר אחד

ב:
$\measuredangle A_1 = \measuredangle A_2 = 30^\circ \Leftarrow$ (3.5.3) $\triangle AEG \cong \triangle AFG$

ΔADF: $\measuredangle AFD = 180 - \measuredangle A_1 - \measuredangle D_3 = 90^\circ$

ΔAEF: $\measuredangle EAF = \measuredangle A_1 + \measuredangle A_2 = 60^\circ$ $\quad$ ג: (1

$\measuredangle EFA = \measuredangle AFD - \measuredangle F_1 = 90 - 30 = 60^\circ$

⇐ ΔEAF שווה צלעות, E4 ו- AG גבהים ותיכונים

$\frac{1}{2}EF = EG = \frac{1}{2}AF = AH$

GH תיכון ליתר AF במשולש ישר זווית ΔAGF

$GH = \frac{1}{2}AF = AH$

(2) HG קטע אמצעים ב ΔAEF ⇐ HG∥AE ⇐ HG∥AC

ג. ΔECD הוא בעל זוויות 30°,60°,90° ⇐ $ED = \frac{1}{2}DC = \frac{1}{2}AD$

ΔEGD " " ⇐ $GD = \frac{1}{2}ED = \frac{1}{4}AD$

$AG = AD - GD = \frac{3}{4}AD \rightarrow \frac{AG}{AD} = \frac{AG}{AB} = \frac{3}{4}$