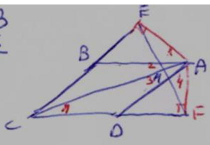
1.103
5



(1)

$\angle A_2 = \angle A_3$ (אלכסונים במעוין חוצים זוויות) –

$\triangle ABE \cong \triangle ADF$ (S.3.3)

$\Downarrow$

$\angle A_1 = \angle A_4$

$\angle A_1 + \angle A_2 = \angle A_3 + \angle A_4$

$\Downarrow$

AM חוצה זווית A.

(2)

$\angle A_3 = \angle C_1 = \alpha$

$\triangle ACF$: $\angle A_3 + \angle A_4 = 90 - \alpha$

$\triangle AEF$: $\angle EAF = 180 - 2\alpha$

$\angle AEF = \angle AFE = \alpha$

$\Downarrow$

$\triangle AEF \sim \triangle ACD$

ג. ראה ב 1.107 6.