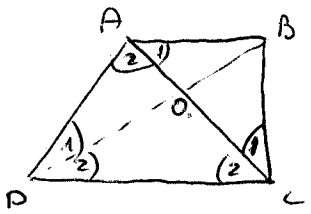


12



$\angle C_1 = \alpha$  (נ"ו)  
 $(\angle C, \text{א"כ } 90^\circ - \angle \text{נ"ו}) \angle C_2 = 90 - \alpha$   
 $(\text{נ"ו}) \angle D = \angle C_2$

$\angle A_2 = 2\angle C_1 \iff \angle A_2 = 180 - (90 - \alpha) - (90 - \alpha) = 2\alpha$

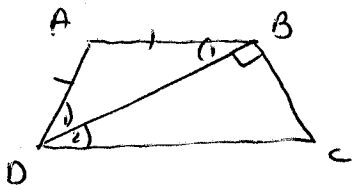
$\triangle ODC$ :

$\angle C_2 = \angle D = 3\angle D_1$   
 $\angle D_2 = 2\angle D_1$   
 $\angle O = 90^\circ$

$180 = 90 + 3\angle D_1 + 2\angle D_1$   
 $5\angle D_1 = 90$   
 $\angle D_1 = 18$

$(90^\circ - \angle C, \text{א"כ } \text{נ"ו}) \angle C_2 = 54$   
 $(\angle C_2 \text{ א"כ } \text{נ"ו}) \angle A_1 = 54$   
 $\angle B = 90$

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$\angle B = 2\alpha$  (נ"ו)  
 $(\text{צ"ל } \triangle ABD) \angle D_1 = \alpha$   
 $(\angle B, \text{א"כ } \text{נ"ו}) \angle D_2 = 2\alpha$   
 $(\text{צ"ל } \triangle BDC) \angle C = \angle D = 2\alpha$

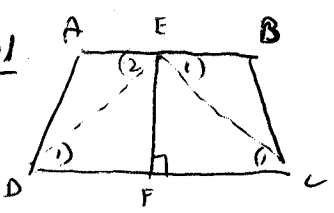
$180 = 90 + 2\alpha + \alpha \quad : \triangle OBC$   
 $3\alpha = 90$   
 $\alpha = 30$

$\angle A = \angle B = 120, \quad 60 = \angle O = \angle C$   
 $30, 60, 90$  - משולש ישר זווית עם זווית של  $30^\circ$  - הניצב למניב הוא  $\frac{1}{2}$  מהיתר.

$BC = \frac{1}{2} DC$   
 $5 = \frac{1}{2} DC$   
 $DC = 10$

(נ"ו)  $AB = AD = BC = 5$   
 היתר הכולל =  $3 \cdot 5 + 10 = 25$

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$(\text{ז.ז.ז}) \triangle EFC \cong \triangle EFD$

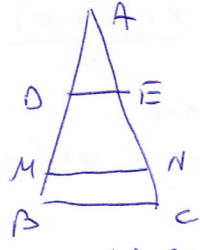
$\angle C_1 = \angle D_1$

(א"כ)  $\angle E_1 = \angle C_1, \quad \angle E_2 = \angle D_1$   
 $\angle E_1 = \angle E_2$

$(\text{ז.ז.ז}) \triangle EBC \cong \triangle EAD$

$BC = AD$

20  
137



$\angle A = \alpha$  (NO) 1c

↓

(1)  $\angle D = \angle E = \frac{180 - \alpha}{2}$  :  $\triangle ADE$

(2)  $\angle B = \angle C = \frac{180 - \alpha}{2}$  :  $\triangle ABC$

↓

$\angle B = \angle C$

(1)  $DE \parallel BC$   
 (2)  $BC \parallel DE$

(1)  $MN \parallel BC$  ?  
 (2)  $BC \parallel DE$

↓

$MN \parallel DE$

↓

$MD = EN$

$AB = AC$

$AD = AE$

~~$AB - AD = AC - AE$~~

$\angle M = \angle D$   
 $\angle N = \angle E$

$\triangle AMN$

$AM = AN$

$AM - AD = AN - AE$   
 $MD = EN$