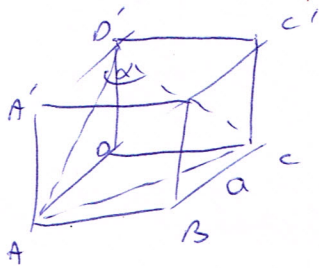
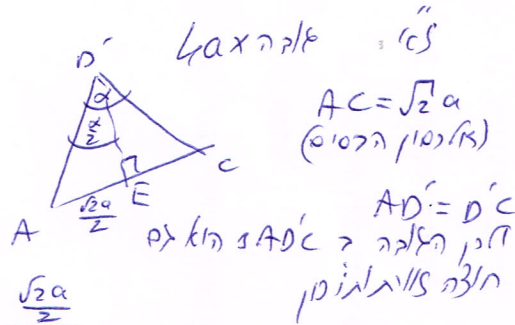


$\frac{\sqrt{2}}{2}$
(267)



= $\frac{c}{\sqrt{2}}$ במחלקת התיבה
היקף הכסוס x אקרה

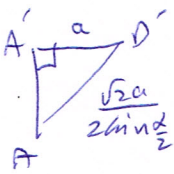


$AC = \sqrt{2}a$
(כאן הכסוס)

$AD' = D'C$
אין העקרה > AD'C הוא משולש ישר זווית

$$\sin \frac{\alpha}{2} = \frac{AE}{AD'} = \frac{\frac{\sqrt{2}a}{2}}{AD'}$$

$$AD' = \frac{\sqrt{2}a}{2 \sin \frac{\alpha}{2}}$$



$$A'A^2 = AD'^2 - A'D'^2$$

ממשל
: AA'D'

$$A'A^2 = \frac{2a^2}{4 \sin^2 \frac{\alpha}{2}} - a^2 = a^2 \left(\frac{1}{2 \sin^2 \frac{\alpha}{2}} - 1 \right)$$

$$= a^2 \left(\frac{1 - 2 \sin^2 \frac{\alpha}{2}}{2 \sin^2 \frac{\alpha}{2}} \right) = a^2 \frac{\cos \alpha}{2 \sin^2 \frac{\alpha}{2}}$$

$\cos \alpha = 1 - 2 \sin^2 \frac{\alpha}{2}$

$$A'A = \frac{a \sqrt{\cos \alpha}}{\sqrt{2} \sin \frac{\alpha}{2}}$$

$$S_{\text{משולש}} = 4a \cdot \text{אקרה} = \frac{4a \cdot a \sqrt{\cos \alpha}}{\sqrt{2} \sin \frac{\alpha}{2}} = \frac{4a^2}{\sin \frac{\alpha}{2}} \sqrt{\frac{\cos \alpha}{2}}$$

$0^\circ < \alpha < 90^\circ \leftarrow \cos \alpha > 0 \leftarrow \frac{\cos \alpha}{2} > 0$ (1, 3) $\cdot 2$

$4a^2 = \frac{4a^2}{\sin^2 \frac{\alpha}{2}} \sqrt{\frac{\cos \alpha}{2}} \rightarrow \sin^2 \frac{\alpha}{2} = \sqrt{\frac{\cos \alpha}{2}} / (1)^2 \cdot 1$

$\sin^2 \frac{\alpha}{2} = \frac{\cos \alpha}{2} = \frac{1 - 2 \sin^2 \frac{\alpha}{2}}{2} \rightarrow 2 \sin^2 \frac{\alpha}{2} = \frac{1}{2}$

$\sin^2 \frac{\alpha}{2} = \frac{1}{4} \rightarrow \sin \frac{\alpha}{2} = \pm \frac{1}{2} \rightarrow \alpha = 60^\circ, 300^\circ$
 $\alpha = -60^\circ, 60^\circ$

$\alpha = 60^\circ$ וכן $0 < \alpha < 90$ " ראינו "

כאן $AD'C$ הוא משולש ישר זווית $\frac{c}{\sqrt{2}}$ כאקרה הוא האקרה שווה $\frac{c}{\sqrt{2}}$