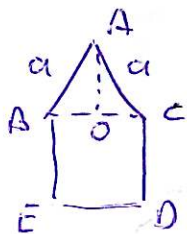


49
(680)



$2\alpha \rightarrow A$ (115, 170)
* $\angle OAC = \alpha$ 105

$\sin \alpha = \frac{OC}{AC} \rightarrow OC = a \sin \alpha$

$BC = 2OC = 2a \sin \alpha$

$\cos \alpha = \frac{AO}{AC} \rightarrow AO = a \cos \alpha$

$F = S_{\triangle ABC} + S_{\square BCED} = \frac{2a \sin \alpha \cdot a \cos \alpha}{2} + (2a \sin \alpha)^2$

$= a^2 \sin \alpha \cos \alpha + 4a^2 \sin^2 \alpha$

$F' = a^2 (\cos \alpha \cdot \cos \alpha - \sin \alpha \sin \alpha) + 4a^2 \cdot 2 \sin \alpha \cos \alpha$

$F' = a^2 \cos 2\alpha + 4a^2 \sin 2\alpha = 0$

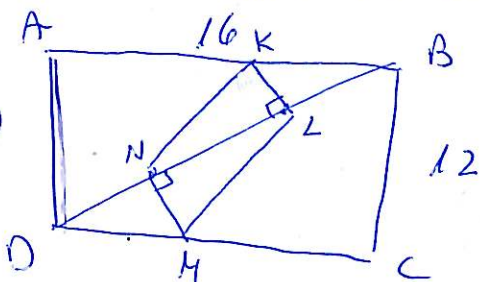
$a^2 \cos 2\alpha = -4a^2 \sin 2\alpha \quad | : (-4a^2 \cos 2\alpha)$

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

* $A = -14.036 = 165.963$

α	150	165.963	170
y'	+		-
y	\nearrow	max	\searrow

10
(682)



$BD^2 = 16^2 + 12^2 \Rightarrow BD = 20$ (10)

$NL = DB - DN - LB = 20 - 2DN$

$NL = 20 - 2x$

$DN = x$ (10)

$\triangle DNM \sim \triangle DBC$

$\frac{DN}{DC} = \frac{NM}{BC} \Rightarrow \frac{x}{16} = \frac{NM}{12} \Rightarrow NM = \frac{12}{16}x$

$NM = \frac{3}{4}x$

$F = NL \cdot KL = NL \cdot NM = (20 - 2x) \cdot \frac{3}{4}x = 15x - 1.5x^2$

$\Rightarrow F' = 15 - 3x \Rightarrow x = DN = 5$

$F(x=5) = 10 \cdot \frac{3}{4} \cdot 5 = 37.5$ (7)

x	4	5	6
y'	+		-
y	\nearrow	max	\searrow