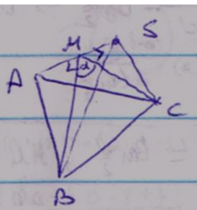
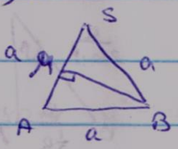
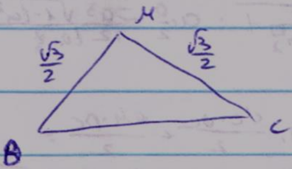
$\frac{3.69}{5}$ א.



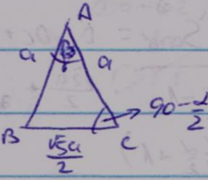
ב. הצלעות מלבד BC שוות a.




M
$\frac{\sqrt{3}}{2}$
$\frac{\sqrt{3}}{2}$
B
C

$BM = \frac{\sqrt{3}}{2}a \longrightarrow$ באותה צורה $MC = \frac{\sqrt{3}}{2}a$

$BC^2 = \frac{3}{4}a^2 + \frac{3}{4}a^2 - 2\cdot\frac{3}{4}a^2\cdot\frac{1}{6} = \frac{5a^2}{4}$


A
a
β
a
$90-\frac{\alpha}{2}$
B
$\frac{\sqrt{5}a}{2}$
C

$\frac{\sqrt{5}a}{2\sin\beta} = \frac{a}{\cos\frac{\beta}{2}}$

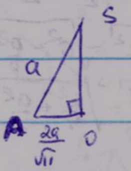
$\sqrt{5} = 4\sin\frac{\beta}{2}$

$\sin\frac{\beta}{2} = \frac{\sqrt{5}}{4}$

$\cos\frac{\beta}{2} = \frac{\sqrt{11}}{4}$

$2R = \frac{a}{\cos\frac{\beta}{2}} \rightarrow R = \frac{2a}{\sqrt{11}}$

חוסם של הבסיס


S
a
A
$\frac{2a}{\sqrt{11}}$
O

$h = SO = \sqrt{a^2 - \frac{4a^2}{11}} = \sqrt{\frac{7}{11}}a$

ג.

נחשב את BC:

$BC^2 = 2\cdot\frac{3a^2}{4} - 2\cdot\frac{3a^2}{4}\cdot\frac{1}{5} = a^2$

כיוון כל מקצועות הבסיס שווים זה לזה, הפירמידה ישרה (נתון)

ולכן הפירמידה משוכללת.